### ANNUAL GENERAL MEETING

The Annual General Meeting of Kemira Oyj will be held on Tuesday, 11 April 2000 at 4.00 p.m. in the Kemira House, Porkkalankatu 3, 00180 Helsinki. Attendance is open to shareholders who by 6 April 2000 have been entered in the company's Shareholders' Register which is kept by Finnish Central Securities Depository Ltd and have given notification of their intention to attend the meeting no later than by 7 April 2000, 4.00 p.m. Shareholders wishing to attend the meeting are kindly requested to register with Ms Arja Korhonen or Ms Seija Mörsky, Kemira Oyj, P.O. Box 330, FIN-00101 Helsinki, Finland; e-mail *arja.korhonen@kemira.com*; telefax +358 10 862 1375; telephone +358 10 8611 on weekdays from 8.00 a.m. to 4.00 p.m.

The proposal of the Board of Directors of Kemira Oyj for the dividend to be paid out for the 1999 financial year is EUR 0.23 per share. The record date of the dividend payment is 14 April 2000 and the date of the payment 26 April 2000.

## PROFIT AND LOSS INFORMATION

Kemira will publish information on its 2000 financial year in Finnish, Swedish and English as follows:

Interim Report 3 months 9 May 2000 Interim Report 6 months 3 August 2000 Interim Report 9 months 7 November 2000 Financial Statement Bulletin February 2001 Annual Report March 2001

These reports can be ordered from Kemira Oyj, Group Communications, tel. +358 10 8611, fax +358 10 862 1797 or by e-mail at postitus@kemira.com.

Financial reports and press releases will be published in Finnish and English also on the Group's Internet pages at www.kemira.com.

## **INVESTOR RELATIONS**

Kemira Oyj

Kaj Friman, Vice President, Treasury and Group Communications, tel. +358 10 86 21704, e-mail: kaj friman@kemira.com.

This report is a translation of the original Finnish-language Annual Report.

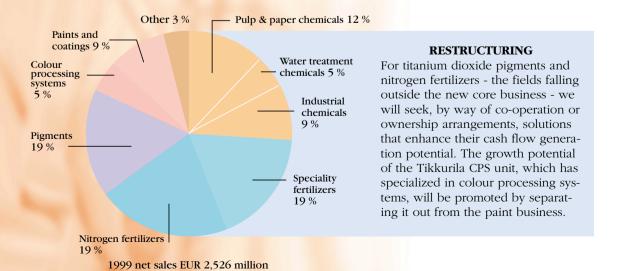
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## **STRATEGY**

Our strategy is to concentrate on fields requiring many-sided competence within the chemical industry. We will seek growth within paper and pulp chemicals, water treatment chemicals and paints. Those fields have promising growth prospects and are less dependent on economic cycles than is the industry average. Other priority areas are speciality fertilizers and industrial chemicals.

FINANCIAL TARGETS			
	1999	2000	Target from 2001
Net sales, growth %	5		over 10
Operating income, % of net sales	4	Restructur-	over 10
Earnings per share, growth %	neg.	ing year	over 10
Cash flow return on capital invested, %	9		over 10
Gearing, %	95		40-100



## **BUSINESS AREAS**

### **KEMIRA CHEMICALS**



Kemira Chemicals is a major producer of chemicals for the pulp and paper industry and a manufacturer of other industrial chemicals. It is also the leading European manufacturer of water treatment chemicals. It has production facilities in 24 countries.

Net sales in 1999, EUR million	697
% of Group net sales	26
Operating income, EUR million	83
% of Group operating income	75
Personnel at 31.12.	3,046

## TIKKURILA



Tikkurila is one of Europe's leading paint manufacturers. Its main products are decorative paints, wood finishes and coatings for the metal industry. Tikkurila has production facilities in 15 countries.

Net sales in 1999, EUR million	357
% of Group net sales	14
Operating income, EUR million	23
% of Group operating income	21
Personnel at 31.12.	2,283

#### KEMIRA AGRO



Kemira Agro is one of Europe's largest producers of speciality fertilizers for crops and horticulture. It has production facilities in 10 countries.

Net sales in 1999, EUR million	1,015
% of Group net sales	38
Operating income, EUR million	-39
% of Group operating income	-35
Personnel at 31.12.	2,812

## KEMIRA PIGMENTS



The main users of titanium dioxide pigments are the paint, paper and plastics industries. Kemira Pigments' plants are located in Finland, the Netherlands and the United States. Kemira is peeling off the two last-mentioned.

Net sales in 1999, EUR million	488
% of Group net sales	19
Operating income, EUR million	35
% of Group operating income	31
Personnel at 31.12.	1,705

## OTHER COMPANIES

Kemira Metalkat manufactures catalytic converters and Kemira Safety makes respiratory protective equipment. Kemira Oyj is the parent company of the Group, and it is responsible for the Group's strategic management, administration, finance and other corporate services as well as the sale of energy. These three companies had aggregate net sales in 1999 of EUR 77 million, representing 3% of consolidated net sales. The number of personnel at the end of the year was 455 people.

## TO THE READER

For Kemira, the 2000 decade is opening in the midst of a reassessment of the Group's business mix. Towards the end of 1999 we took a decision to sharpen the focus of our Group strategy.

Our objective is a more stable profit-making ability and faster growth within paper and pulp chemicals, water treatment chemicals and paints. Speciality fertilizers and industrial chemicals generate cash flow. We will lower substantially the proportion of capital-intensive, cyclically sensitive business from the present level. This will mean ownership and cooperation arrangements within the titanium dioxide pigment and nitrogen fertilizer businesses.

In 1999 the world economy rebounded smartly, spurred by brisk growth in the United States and Asia. Within the European chemical industry the signs of an upswing began to show up in the latter months of the year.

Most of Kemira's business areas developed favourably during the year under review, but despite this the Group's financial result weakened compared with the previous year. This was attributable

above all to the large non-recurring costs incurred by Kemira Agro and to the low prices of fertilizers.

Environmental issues are of central importance to Kemira. Environmental issues place great demands on the chemical industry, but at the same time solutions to them offer new opportunities for us to develop our operations. We offer our customers products and services that enable them to deal with environmental issues efficiently. Last year the environmental business generated EUR 313 million of income, or a good 12 per cent of our net sales. This business will account for a growing share of our operations in coming years.

We aim to focus particular attention on research and development. At the same time we will exploit more widely than ever before our own expertise and the synergies among our business areas. An example of a unifying factor is water: we supply products and know-how to municipalities and industry for the purification of drinking and waste

water as well as for the treatment of process water in the paper industry. We also manufacture waterborne paints and water-soluble speciality fertilizers. A special Water Research Centre has been set up in conjunction with our research centre in Oulu, Finland.

Now that our operations are shifting from products of the heavy basic chemical industry towards integrated customer solutions, we must ensure that our people have new knowledge, skills and capabilities. Development of the personnel and rewards for good work are one of the main focuses of our attention.

The outlook for 2000 is encouraging, both for Kemira and elsewhere. Asia is expected to recover

and reach nearly the growth rate of past years, whereas Europe may rival the United States' growth figures. In step with improved export prospects, the chemical industry is expected to continue its steady growth. CEFIC, the European chemical industry's umbrella organization, has forecast growth of 3.5% in 2000.

By realigning our strategy, we will achieve a more efficient use of capital and improve the Group's cash flow. A sharper focus will also enable us to

step up our R&D activities and to direct growth towards fields with the most stable business outlook. Our clear-cut objective is to increase Kemira's shareholder value. Although these major changes will take time, I nevertheless believe that Kemira's structure and earnings ability will be substantially better even by the end of 2000.

I wish to thank our customers, shareholders and other stakeholders for their contributions during the past year. A special vote of thanks goes to our personnel for the good job they have done, and I furthermore believe that as we give our people a greater say in how things are done at our company sites, we will at the same time create a strong spirit of cooperation across a Kemira that is undergoing fundamental renewal.

Tauno Pihlava CEO

## **BOARD OF DIRECTORS' REVIEW**

1999 was a spotty year for the Kemira Group. The positive trend continued for both Kemira Chemicals and Kemira Pigments, both of which improved their earnings markedly. Kemira Agro suffered from the oversupply of nitrogen fertilizers and record-low prices. Tikkurila in turn fared well in the Finnish and Scandinavian market, but sales in Russia again trailed the previous year. Similarly, sales of Tikkurila's CPS tinting machines fell clearly short of the previous year's figure.

Consolidated net sales were up 5% on the previous year and were EUR 2,526 million (2,413 million in 1998). Operating income was EUR 111 million (148 million in 1998), which includes EUR 28 million of non-recurring net costs. Operating in-

The members of the Board of Directors of Kemira Oyj in 1999 were (from the left) Vice Chairman Timo Mattila, Juhani Kari, Tauno Pihlava, as from 1 June, Chairman Heimo Karinen, Esa Tirkkonen, Leif Ekström and Sten-Olof Hansén.

come was 4% of net sales.

Income before taxes and minority interests fell to EUR 59 million, from EUR 97 million a year earlier. Taking into account the non-recurring costs of the structural change, the Group's net income before extraordinary items was near the previous year's level. Income after taxes was EUR 30 million (EUR 79 million in 1998). Earnings per share were EUR 0.23 (0.61).

The major factors that influenced the trend in net sales were the fast growth in the sales of Kemira Chemicals' pulp and paper chemicals (in part thanks to the previous year's acquisitions) as well as the marked growth in the sales volumes of Kemira Pigments' titanium dioxide pigments. About 82% of the Group's net sales came from outside Finland.

The table on page 12 shows the breakdown of consolidated net sales among the different business areas.

Return on equity was 3.2%. The cash flow return on capital invested was 9%. The Group's gearing ratio was 95%.

The Board of Directors proposes that a dividend of EUR 0.23 per share be paid for the 1999 financial year, or a total dividend payout of EUR 29.6 million.

### NEW STRATEGIC FOCUS

In order to improve competitiveness and profitability, the Board of Directors decided to overhaul its business strategy in such a way that in the future the Group will concentrate on fields that have promising growth prospects and are less dependent on economic cycles than is the industry average. In accordance with the new strategy, Kemira will seek growth within paper and pulp chemicals, water treatment chemicals and paints. Other priority areas are speciality fertilizers and industrial chemicals.

For the fields falling outside the new core business (titanium dioxide pigments and nitrogen fertilizers) solutions that enhance their cash flow generation potential will be sought by way of co-operation or ownership arrangements. The growth potential of the Tikkurila CPS unit, which has specialized in colour processing systems, will be promoted by separating it out from the paint business either by listing it on the stock exchange or by means of other M&A arrangements.

The arrangements concerning Kemira Pigments have progressed the farthest now that sale agreements have been signed for the divestment of the plants in the United States and the Netherlands. Plans concerning Tikkurila CPS are also expected to be implemented this year. It is more difficult to set a time for the arrangements concerning Kemira Agro's nitrogen fertilizer business, but the objective is nevertheless to find a solution already during the current year.

The cash flow from the arrangements will be used for the accelerated expansion of the above-mentioned growth areas, both organically and via acquisitions. Kemira considers eastern Central Europe, Russia, North America, and the Far East to be its geographical growth areas.

In connection with Kemira's strategy process, the Board of Directors confirmed the new financial targets for the Group's profitable growth. At the same time attention will be paid to the efficient use of capital and to the Group's balance sheet structure. The objectives are set forth in the table on page 4.

## KEMIRA CHEMICALS

The Group's fastest growing area was again Kemira Chemicals, whose net sales rose by 11% to EUR 697 million (630 million in 1998). All three strategic business units – Pulp & Paper Chemicals, Kemwa-

ter and Industrial Chemicals – grew. Kemira Fine Chemicals also grew further.

Kemira Chemicals posted operating income of EUR 83 million (75 million in 1998), or 12% of net sales (12%). Operating income for the September-December period was 27 million, compared with EUR 20 million in the same period a year earlier. While the previous year's change in the actuarial assumptions for calculating the liability of Finnish pension funds resulted in a non-recurring cost of about EUR 4 million as a contribution to the supplementary pension foundation, another change brought a nearly equally large credit to income last year.

Sales by the Pulp & Paper Chemicals unit, which has been named one of the Group's strategic growth areas, grew by 18%. About half of the growth was generated thanks to the acquisitions made in 1998 (the hydrogen peroxide plants in South Korea and Canada). The remainder represented organic growth, because the production volumes of the pulp and paper industry developed favourably as the year wore on.

Demand for hydrogen peroxide held up well and prices have risen slightly. The other products of the Pulp & Paper unit have also sold well, and the unit has been able to keep up its good profitability. The unit invested about EUR 5 million in its plant in Vaasa, with the aim of expanding the speciality chemicals business and improving the efficiency of AKD sizing production and product quality.

In line with its worldwide growth strategy, the Pulp & Paper Chemicals unit is strengthening its market position in South America significantly by building a paper chemicals plant in the Brazilian state of Parana and by bringing in its own expertise to serve the local paper indus-

try. Production of sizing and speciality chemicals used in the paper industry is estimated to get started towards the end of this year.

The markets of the Kemwater business unit developed as expected and growth continued in Eastern and Southern Europe. Kemwater's net sales grew by 7%, though operating income was below last year's figure owing to start-up costs and credit loss provisions. Kemwater is another of the Kemira Chemicals units that belongs to the Group's strategic growth areas.

Many of the regional expansions of the operations that were launched by Kemwater in the previous year resulted in larger costs compared with normal operations, though they did not generate corresponding income. Kemwater Brasil S.A. invested EUR 3.1 million in a water chemicals plant that is to be built in Salvador in northern Brazil. The new plant will manufacture solid iron sulphate and it is estimated to be completed in the first half of this year. This will make Kemira Brasil the market leader within water chemicals in Brazil

At the beginning of last year an agreement entered into effect by which Kemira Chemicals purchased from the Solvay company of Belgium, its ferrichloride production located in Rheinberg, Germany. Kemwater will double the unit's production and at the same time modernize the plant's production technology so that energy consumption and waste water flows can be lowered significantly. The cost of the capital project is EUR 2.7 million.

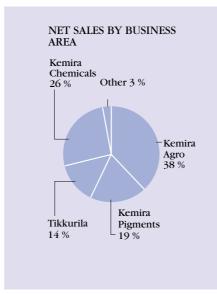
In Pori, Kemwater is upgrading its Ferix plant so that it will be able also to produce a very pure iron-based coagulant that is suitable for the purification of drinking water. In order to gain a foothold in the growing Chinese market, Kemira Chemicals signed an agreement on establishing a joint venture manufacturing water treatment chemicals in China in the vicinity of Shanghai and Nanking. Kemira Chemicals' interest in the new Kemwater (Yixing) Co. Ltd is initially 49%. Finnfund has an 11% stake in the company.

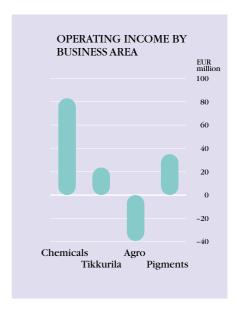
Kemwater and the City of Helsinki established a joint service company in the water treatment field. Kemwater has a 51% stake in the company.

Sales by the Industrial Chemicals unit were up 4%. The market situation for phosphoric acid is still stable, but there has been continued tough competition within down-stream products made from phosphoric acid (feed and detergent phosphates). The exceptionally large-scale shutdown at the Siilinjärvi plants caused additional costs. EUR 12 million was invested on Siilinjärvi to develop the site's production and ensure its competitiveness. The calcium chloride market is tight, because substitute products are putting pressure on prices and, additionally, raw materials are becoming more expensive. Operations of the sodium percarbonate plant that was completed in the previous year showed positive development and the future outlook is good and the new product has been well received by customers

Kemira Fine Chemicals increased both its net sales and operating income. The unit is a custom manufacturer of demanding fine chemicals and last year it signed a five-year agreement with Monsanto concerning the manufacture of the active ingredient in a new wheat fungicide.







#### TIKKURILA

Tikkurila's net sales fell 1% short of the previous year's figure and were EUR 357 million (361 million in 1998). Sales of decorative paints in Finland were brisker than last year, whereas the economic crisis in Russia still kept sales volumes small. Worldwide sales of colorants grew further, but this was offset by the sales of tinting machines, which were markedly smaller than they were a year earlier.

Operating income was EUR 23 million (33 million in 1998), or 6% of net sales. Operating income in the September-December period was EUR 1.6 million, compared with an operating loss of 0.8 million in the same period a year earlier. Credit loss provisions primarily for receivables from Russia were booked in a total amount of EUR 3.1 million, of which about a quarter came in the last three-month period.

The control system of Tikkurila's Monicolor plant in Vantaa was renewed and at the same time production capacity was raised significantly. In the vicinity of Moscow, construction work got started on a second paint plant that Tikkurila will operate in Russia. The target is to start production in the first half of this year. Deliveries by the company's plants in St Petersburg picked up towards the end of the year. In Western Europe testing of a new marketing concept was started during the year in co-operation with the Italian company Benetton.

A colorant plant was completed in Singapore towards the end of the year. In China too a unit that will manufacture components for colour processing systems will be built.

In line with the new strategic focus, the Group's objective is to promote the

growth potential of the paint business by divesting Tikkurila CPS either entirely or in part.

#### KEMIRA AGRO

Kemira Agro's net sales declined by 2% and were EUR 1,015 million. The volume of sales in Western Europe was at the previous year's level. Overseas exports outside Europe grew significantly, up 35% on the previous year. On the other hand, the plant nutrient markets in Finland's nearby areas in the Baltic countries and Poland were in decline.

Prices of plant nutrients fell further. by 5-15%, particularly within nitrogen fertilizers in Western Europe and they ended at an all-time low level. New capacity, the cost advantage which Russian nitrogen products enjoy owing to cheap natural gas, and China's absence as a purchaser of nitrogen products have all been factors keeping prices of these products low. At present it nevertheless appears that prices bottomed out towards the end of the year. Owing to the risks posed by the East European countries and the Baltic area, credit loss provisions were increased by total of EUR 6 million.

The fall in the prices and sales volume of plant nutrients was reflected in the company's operating income, which fell significantly and was a loss of EUR 39 million. In the September-December period operating income was EUR 37 million negative, whereas a year earlier it was EUR 19 million negative. Operating income in the last four months of the year includes a total of EUR 23 million of non-recurring costs that are mainly connected with the company's structural change.

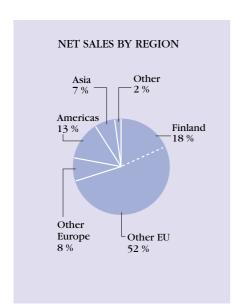
In line with the Group's strategic policy, Kemira Agro will focus on speciality fertilizers and withdraw from the nitrogen fertilizer business either in part or totally. In anticipation of this change, the company's organization was divided into two parts in January 2000: the speciality fertilizer business and the nitrogen fertilizer business.

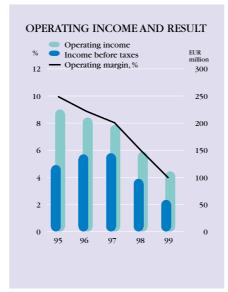
NPK fertilizer production was wound up at Pernis in the Netherlands and plans call for also closing the phosphoric acid, sulphuric acid and MAP/DAP phosphorus fertilizer plants in the summer of this year. Kemira Agro booked a total of EUR 39 million of non-recurring costs for the past financial year, the bulk of which was related to the arrangements at Pernis

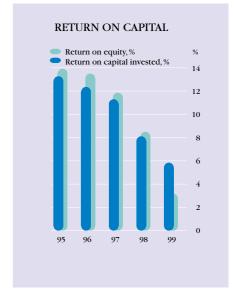
In accordance with the memorandum of intent that was signed in the previous year, Kemira Agro established a joint venture that will manufacture potassium nitrate, which is a speciality fertilizer, and dicalcium phosphate, a raw material used in feeds, in Jordan. The capital project, which is to be completed in 2002, is based on local raw materials and Kemira-developed cost-effective technology.

In Italy, Kemira Agro acquired a 50% interest in Biolchim S.p.A, which markets horticultural fertilizers. A joint venture that will manufacture urea phosphate was established in the United Arab Emirates. The new company will build a new plant in Dubai with the objective of starting production by the end of 2000.

The joint ventures in Dubai, Jordan and Italy will enable Kemira Agro to expand its operations, according to its specialization strategy, in the irrigation fertilizer markets in the Mediterranean countries as well as in the Middle East and







Far East. In Denmark, potassium nitrate production was expanded, and the plant extension is being continued through a new investment that is expected to be completed in the autumn of 2000.

NPK projects in Southeast Asia progressed according to plans and the plant of a joint venture in Malesia, in which Kemira Agro has a 30% holding, started up in mid-1999. Construction works on the plant in China continued ahead and the facility is expected to reach completion in the autumn of 2000. Kemira Agro has a 49% interest and Finnfund a 26% interest in the joint venture in China.

In Finland, Kemira Agro purchased an 20% holding in the Suomen Rehu animal feed business, thereby strengthening the logistics co-operation that has already been started.

The development programme that was launched at the beginning of 1998 at Kemira Agro has progressed according to plans. Its objective is to achieve a significant improvement in earnings, which will show up to the full extent in 2001.

#### KEMIRA PIGMENTS

Kemira Pigments' net sales rose by 15% and were EUR 488 million. Average selling prices for titanium dioxide pigments during the year were at the previous year's level. Selling prices in the September-December period were about 2% lower than prices in the May-August period and prices in the last four months of 1998.

Sales volumes of titanium dioxide pigments were 13% higher than they were a year earlier. The sales volume in the last four months of the year was 25% higher than it was in the last four months of the previous year, a situation

that may be partly attributable to the precautions taken by customers on the eve of the new millennium.

Demand was in decline in Europe and Asia in the previous year, but it swung to strong growth during 1999, particularly after the January-April period. In North America demand remained good, though in Latin America it was weak throughout the year.

Changes in the titanium dioxide industry continued when the American company Huntsman Chemicals acquired Tioxide from ICI. Kemira is also peeling off its plants in the United States and the Netherlands.

Kemira Pigments' operating income was EUR 35 million (22 million in 1998), or 7% of net sales. Operating income in the September-December period was EUR 18 million, as against EUR 10 million in the previous four month period and EUR 7 million in the last four month period of the previous year. A change in the actuarial assumptions for calculating the liability of Finnish pension funds resulted in a non-recurring reversal of about EUR 3 million in contributions to the supplementary pension foundation in the September-December period. whereas in the previous year the change resulted in having to book a one-off expense of the same size.

The debottlenecking project at the Pori plant was completed according to plans towards the end of the 1999. Thereafter the Pori unit's production capacity will be 120,000 tonnes a year.

#### OTHER UNITS

Kemira Metalkat, which manufactures catalytic converters, reported net sales growth of 19%, to EUR 36 million. Operating income was EUR 3.1 million, as

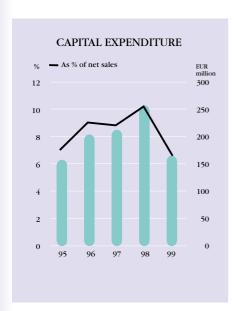
against EUR 1.7 million a year earlier. Net sales by Kemira Safety, which manufactures personal protection equipment, were down 1%, to EUR 14 million. Operating income was EUR 0.9 million (1.3 million in 1998).

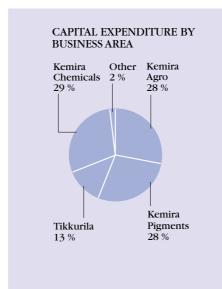
#### GROUP FINANCIAL PERFORMANCE

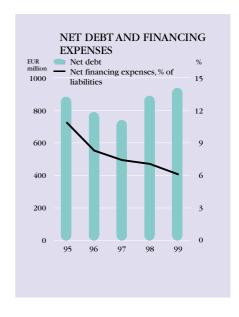
The Group's operating income was EUR 111 million (148 million in 1998), or 4% of net sales. This figure includes a total of EUR 28 million of non-recurring net costs. Income before taxes and minority interests was 59 million (97 million in 1998). Net financial expenses were EUR 52 million (51 million in 1998). Income after taxes was EUR 30 million (79 million in 1998). The effective tax rate rose from 20% to 47%. The increase in the effective tax rate was mainly due to the non-recurring costs booked. As was reported in the previous year's financial statements, taxes in the 1998 income statement were reduced by an EUR 14 million deferred taxes item which resulted from a review of the accounting policy in line with changed IAS rules. The return on capital invested was 5.9% (8.3%).

#### CAPITAL EXPENDITURE

The Group's capital expenditures totalled 168 million (255 million in 1998), or 6.7% of net sales. Capital expenditures were at a clearly lower level than they were a year earlier because no major acquisitions were made. Depreciation on fixed assets amounted to EUR 188 million. Proceeds on the sale of fixed assets amounted to EUR 18 million (14 million in 1998), whereby net capital expenditures were 150 million, or 5.9% of net sales. The Group's environmental







protection investments were EUR 13 million. All the most important capital expenditures are discussed in the reviews of the business areas.

The Group spent about EUR 48 million on research and development, or about 2% of net sales. The figure does not include capital expenditures.

## ENVIRONMENTAL PROTECTION AND MANAGEMENT OF RISKS

Environmental protection is an essential part of the Group's operations, and a verified Environmental Report is included in this Annual Report.

The Group continually pays particular attention to ensuring that its operations are safe and its plants run without disturbances. In view of this, operations are also evaluated together with the risk management units of insurance companies

The Kemira Group made the changeover to the year 2000 without any significant problems.

#### **FINANCING**

The Group's financial position remained stable. Interest-bearing net debt at the end of 1999 stood at EUR 934 million (892 million at the end of 1998). The strengthening of the United States dollar, the British pound and the Swedish krona against the euro raised the consolidation values of loans taken out in these currencies. This lead to an increase in net debt. During the year two new loans were raised in a total amount of EUR 25 million and with maturities of about 10 years.

Cash flow before financing was EUR 31 million (119 million negative in 1998). The Group's equity ratio was 38% at the

close of the year (39%). The gearing ratio (net debt as a ratio of shareholders' equity) was 95%. The amount of liquid funds remained at the same level as during the previous year. At the end of the year they amounted to EUR 88 million and unused agreed credit facilities amounted to about 260 million.

Net financing expenses were EUR 52 million (51 million in 1998). The increase in costs due to the rise in interest rates was partially compensated by smaller losses on foreign exchange as well as to measures taken for hedging interest rate risks. The proportion which fixed-interest loans represent within the total amount of the Group's interestbearing long-term loans (excluding pension loans, which are not considered to be fixed-interest liabilities) was 41% at the end of the year. Foreign exchange losses amounted to EUR 1.6 million (a foreign exchange loss of EUR 5.4 million in 1998)

## PARENT COMPANY'S FINANCIAL PERFORMANCE

The parent company's net sales come only from the sale of energy in Finland, both within and outside the Group. The parent company had net sales of EUR 27 million (32 million in 1998). Operating income was EUR 3.5 million (an operating loss of EUR 6.7 million in 1998). The parent company bears the cost of Group management and administration.

The parent company and the Eläkesäätiö Neliapila pension foundation sold a significant part of their electric power business for EUR 30 million. The deal yielded a capital gain of about EUR 9 million for the parent company. For Eläkesäätiö Neliapila, the capital gain contributed to lowering contributions to

the fund.

The parent company's financial income amounted to EUR 16.5 million (8.2 million in 1998). Income before taxes and appropriations was EUR 102 million (108 million in 1998). The parent company's capital expenditures amounted to EUR 67 million, including increases in the equity of subsidiaries.

#### **PERSONNEL**

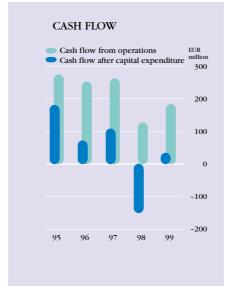
The Group employed an average of 10,743 people, or 42 less than in the previous year. Of the total personnel, an average of 5,653 people were employed by Group companies outside Finland.

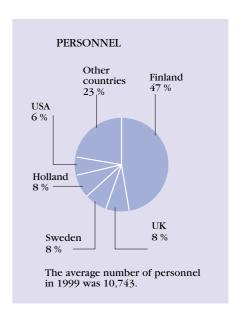
The parent company had an average payroll of 132 employees, one less than a year ago.

The Group's total salaries and wages were EUR 353 million (338 million in 1998) and the parent company's total salaries and wages were EUR 5.2 million (4.8 million in 1998). Salaries and remuneration paid to the Supervisory Board, the members of the Board of Directors and the managing directors totalled EUR 8.3 million for the Group (EUR 8.2 million in 1998) and EUR 0.9 million for the parent company (0.8 million in 1998).

During the year under review the following persons served on the Board of Directors of Kemira Oyj: Heimo Karinen (Chairman), Timo Mattila (Vice Chairman), Juhani Kari, Esa Tirkkonen, Tauno Pihlava as of 1 June, Leif Ekström and Sten-Olof Hansén, the last two of whom served as non-executive directors. At its meeting on 16 December 1999, the Supervisory Board elected the following six persons to seats on the Board of Directors for the period of office beginning on 1 January 2000: Sten-Olof Hansén (Chairman), Niilo Pellonmaa (Vice Chair







man), Timo Kaisanlahti, Eija Malmivirta, Anssi Soila and Tauno Pihlava.

CEO and Chairman Heimo Karinen retired at the end of 1999 and Tauno Pihlava was elected to succeed him as CEO effective 1 January 2000.

A large part of the Group's personnel are covered by various bonus systems that vary from country to country. In addition, the Group has a share option system for top management. This is discussed in greater detail on pages 13.

On the basis of an authorization granted to the Board of Directors by the Annual General Meeting, the company bought back a total of 1,000,000 of its own shares during the summer at an average price of EUR 5.82. The authorization was for purchasing a total maximum amount of 2% of the shares outstanding and the shares are to be used in paying profit-related bonuses to the personnel funds in the event that the funds choose this mode of payment.

#### **OWNERSHIP**

The Finnish government's holding in Kemira was 53.4% at 31 December 1999. The proportion held by institutional investors outside Finland was 19.0%, whereas Finnish institutional investors and mutual funds held 21.3% of the shares. Private investors' holdings amounted to 6.3% of the shares outstanding.

## CHANGES IN THE GROUP STRUCTURE

Various companies or participations were established, acquired or divested during the year, as discussed in the review of the business areas above. The changes in the Group structure are presented in more detail on page 35.

## OUTLOOK FOR THE FUTURE

The rise in the rate of capacity utilization that got under way within the pulp and paper industry towards the end of 1999 and the improvement in the demand for paper products are expected to continue in the current year. This is expected to have a positive impact on the market situation for pulp and paper chemicals. The market for water treatment chemicals appears stable, and the companies that were established or acquired last year are expected to get up to good speed. The price of phosphoric acid may fall, but at present this is offset by the high exchange rate of the dollar against the euro. It is believed that Kemira Chemicals' operating income will remain at the present level or grow in 2000.

Demand for titanium dioxide pigments is expected to be good and average prices to rise higher than last year's when the price increases that were announced towards the end of last year come into effect at the beginning of the current year. This year's net sales will be highly dependant on the timing of the closing of the divestment of the US and Dutch operations, whereas it is not expected to have any major impact on the operating income. It is believed that Kemira Pigments' operating income will improve on last year's.

No essential improvement is likely to take place in the world markets for agricultural products during 2000. Recently a number of West European and American fertilizer producers have announced plant closures to cut capacity, and prices have headed upwards. On the other hand, China is curtailing its imports of NPK compound fertilizers, and this will probably lead to smaller export volumes than before. The higher cost of natural gas due to the rise in oil prices will lift costs in continental Europe. Although the horticultural fertilizer business in expected to show continued positive development, and the profit-boosting programme that was started last year is progressing according to plans, it is believed that the operating result within the framework of Kemira Agro's present structure will still be in the red. Disposal of the nitrogen fertilizer business is expected to improve the result in coming years, but it is so far not possible to estimate the one-off impacts of the arrange-

Demand for Tikkurila's paints is expected to grow both in the established

markets and in those which are just beginning to expand. Growth prospects are promising, particularly in Russia, the Baltic countries and Poland. Operating income is expected to improve on last year's. In order to ensure the continued growth of both the paint and colour processing system business, Kemira intends to separate the colour processing business out from the paint business either by listing it on the stock exchange or through other ownership arrangements

2000 is expected to be a year of great changes for Kemira, because the company is withdrawing from a significant part of its previous core businesses. At the most, net sales may drop by about a third from the present level as a consequence of the divestments. The funds realized from the disposals will be applied towards expanding Kemira's business operations in chosen growth areas: pulp and paper chemicals, water treatment chemicals and paints. The objective is to regain the previous level of net sales within 3-5 years. This will also call for acquisitions over the next few years. Although Kemira Agro's operating result will remain weak, the operating result of the other three large businesses is expected to improve. Net financial expenses are estimated to remain at the previous level or to rise only slightly from the present level. The Group's result for the current year is expected to improve on last year's earnings.

Beginning this year, Kemira will report its results quarterly. The table on page 69 presents the quarterly financial development for 1999 and 1998.

## EARNINGS AND PERSONNEL BY BUSINESS AREA IN 1999

EUR million	Net sales	Operating income	Income before extraordinary items	Personnel, average
Kemira Chemicals	697	83	59	3,138
Tikkurila	357	23	19	2,301
Kemira Agro	1,015	-39	-59	2,951
Kemira Pigments	488	35	15	1,752
Others*	85	9	25	601
Intra-Group sales	-116			
Group, total	2,526	111	59	10,743

<sup>\*</sup> Includes other businesses, Group administration and eliminations from operating income and income before extraordinary items.

All forecasts and estimates are based on management's current judgement of the economic environment, and the actual results may differ significantly.

## SHARES AND SHAREHOLDERS

## SHARES AND VOTING RIGHTS

The nominal value of the shares of Kemira Oyj was deleted in accordance with the resolution of the Annual General Meeting, and at the same time the share capital was redenominated in euros. The number of shares is 128,800,000 and each share confers one vote at the meetings of shareholders. According to the Articles of Association, the company's share capital can be in the range of from EUR 217 to 850 million. The share capital can be changed within these limits without amending the Articles of Association. The share capital of Kemira Oyj at present is EUR 217 million. Kemira Oyj shares are registered within the book-entry system.

#### DIVIDEND POLICY

Kemira aims to distribute a dividend which in the long term is competitive with that of major Finnish companies and with foreign chemicals groups, nevertheless taking into account the company's result and capital requirement at any given time. The company's Board of Directors will propose to the Annual General Meeting that a dividend of EUR 0.23 per share, or EUR 29.6 million, be paid for the 1999 financial year. This corresponds to a dividend payout of 100% of the net income for the year. Taking into account the Finnish tax base, this amounts to a taxable dividend of EUR 0.32. The record date for the dividend payout will be 14 April 2000, and the dividend will be paid on 26 April 2000.

### INCREASE IN SHARE CAPITAL

The Board of Directors of Kemira Oyj does not at present have authorizations to increase the company's share capital. During the past year the share capital was increased by a transfer of EUR 0.4 million from the share premium account, whereby the share capital is now EUR 217 million.

## PURCHASE OF OWN SHARES

On 7 April 1999, the Annual General Meeting passed a resolution to authorize the company's Board of Directors to purchase a maximum of 2,576,000 of the company's own shares on the market in order to create a share-tied incentive system for the company's personnel. The authorization is valid for one year from the date of the Annual General Meeting. During June 15 to August 13 Kemira Oyj purchased 1,000,000 of its own shares at an average price of EUR 5.82. The shares are at present in the company's ownership but they will be sold on to the personnel funds operating within the company.

#### INSIDER RULES

In accordance with the decision of the Board of Directors of Kemira Oyj, the Kemira Group has placed in use insider rules pursuant to the Guidelines for Insiders issued by Helsinki Exchanges on 28 October 1999. A list of insiders including their shareholdings is given on page 66 of the Annual Report.

#### LISTING AND SHARE TRADING

Kemira Oyj's shares have been listed on Helsinki Exchanges since 10 November 1994. In addition to Helsinki, trading in the shares is done through the SEAQ International trading system operated by the London Stock Exchange. Kemira is also part of the PORTAL system in the United States. In the United States, Kemira's shares were issued under Regulation 144A, whereby only qualified institutional buyers permitted under this legislation are allowed to buy and sell the shares. Kemira's shares can also be traded in the United States in the form of ADS shares. One ADS share corresponds to two Kemira shares.

### PRICE AND TRADING VOLUME

The price of Kemira's share on Helsinki Exchanges weakened by 2.1% on Helsinki Exchanges during 1999, whereas the HEX index rose by 162%. The highest price of the share was EUR 6.90 and the lowest price was EUR 5.20. The price of the share at the end of the year was EUR 6.11. The taxation value of the share in 1999 was EUR 4.309. Turnover of the share on Helsinki Exchanges totalled 20,702,853 shares, and in euro terms the turnover was EUR 121 million. The market capitalization at the end of 1999 was EUR 781 million.

### MANAGEMENT BOND ISSUE WITH WARRANTS, STOCK OPTIONS AND SHARE OWNERSHIP

On 26 April, 1995, the Annual General Meeting of Kemira Oyj passed a resolution to float an issue of bonds with warrants targeted at the management of the Kemira Group. The amount of the bond loan is EUR 100,912.76. Each member of the Board of Directors who was em-

ployed by Kemira Oyj was entitled to subscribe for a maximum of EUR 13,455.03 of the options. The maturity of the issue is five years beginning on 2 May 1995, the interest is 6% and the issuing price was 100%. The issue of bonds with warrants gives management the right to subscribe for a maximum of 1,200,000 shares in the company between 1 December 1998 and 31 January 2002 at a price of EUR 6.73 per share. These subscriptions can increase the company's share capital by a maximum of EUR 2.02 million. Participating in the bond loan has been subject to a restriction on transfer of the bonds to a third party before 1 December 1998. The bonds with warrants were subscribed for by 16 persons.

In accordance with the terms and conditions of the issue of bonds with warrants, individuals who have participated in the issue can subscribe for half of the shares exercisable with warrants or sell half of the warrants they own after 1 December 1998. At present, no one had sold their warrants or converted them into shares.

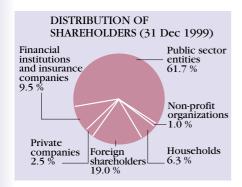
The Annual General Meeting of Kemira Oyj resolved on 22 April 1998 to offer stock options for subscription by the company's management. The total amount of the stock options is 2,850,000 options and they entitle their holders to subscribe a total of 2,850,000 Kemira Oyj shares. The then chairman of the Board of Directors of Kemira Oyj was offered 170,000 options and the other executive directors of Kemira Oyj at that time were offered 120,000 options each. The stock option programme covers a total of about 50 persons.

The share subscription period will commence on 1 May 2001 and end on 31 May 2004. It is a condition for commencement of the subscription that the consolidated income of Kemira Oyj after financial items and before taxes and extraordinary items for the financial years 1998 –2000 is a minimum of EUR 3.53 per share. In order to reach this objective, net income for 2000 after financial items must be EUR 2.32 per share. Similarly, it is a further condition that the price of Kemira Oyj's share has developed better than that of a peer group.

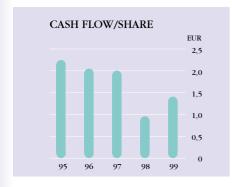
The subscription price is the average

#### DISTRIBUTION OF OWNERSHIP (31 Dec 1999)

Number of shares	Number of shareholders	% of shareholders	Shares total	% of shares and votes
$\begin{array}{c} 1-50\\ 51-100\\ 101-1,000\\ 1,001-5,000\\ 5,001-10,000\\ 10,001-100,000\\ 100,001-500,000\\ 500,001-1,000,000\\ \text{Yli}\ 1,000,000\\ \end{array}$	1,079 1,070 9,068 1,897 118 101 19 8	8.07 8.00 67.83 14.19 0.88 0.76 0.14 0.06	42,968 83,522 3,856,823 3,586,626 914,445 3,118,365 4,472,900 5,942,563 82,865,517	0.03 0.07 2.99 2.79 0.71 2.42 3.47 4.61 64.34
Total	13,369	100.00	, , , ,	
Nominee-registered sh	ares		23,916,271	18.57
Grand total			128,800,000	100.00
_				













<sup>\*</sup> Information of the holding of Franklin Resources Inc. in Kemira Oyj is given on page 69.

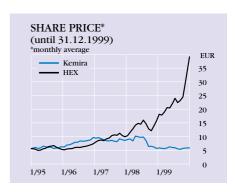
price of the company's share on Helsinki Exchanges, weighted for trading in the year 2000, and lowered by double the percentage figure by which an index calculated on the share trend of Kemira Oyj's share exceeds the arithmetic average index calculated in a similar manner on the share trend in the shares of a peer group. The subscription price of the share will furthermore be lowered by the amount of dividends distributed from 1 June 1998 to 31 May 2001 to the extent that the total amount exceeds one euro per share and the dividends to be distributed after 1 June 2001 will be subtracted in their entirety. The subscription price is nevertheless a minimum of EUR 10.41 less the amount of dividends distributed after 1 June 1998.

The Supervisory Board appointed for the company a new Board of Directors, which began discharging its duties at the beginning of 2000. The members of the present Board of Directors and the Super-

visory Board as well as the Managing Director and the Deputy Managing Director owned 27,080 Kemira Oyj shares at the end of the year. This represents 0.02% of the company's shares and voting rights. The issue of bonds with warrants entitling holders to Kemira Oyj shares has been subscribed for by the Managing Director and the Deputy Managing Director in the amount of EUR 16,818.79, which corresponds to 200,000 share options. The Managing Director and the Deputy Managing Director have subscribed for 290,000 Kemira Oyi share options. These warrants and share options entitle their holders to subscribe for a total of 490,000 shares.

The members of the Board of Directors and the Supervisory Board as well as the Managing Director and the Deputy Managing Director hold 0.40% of the company's shares and voting rights, including those conferred through the issue of bonds with warrants and the stock options.





## **KEY FIGURES**

## PER-SHARE DATA

	1999	1998	1997	1996	1995
Per-share data					
Earnings per share, EUR 1)	0.23	0.61	0.81	0.86	0.77
Net income per share, EUR 1)	0.23	0.61	0.81	0.86	0.77
Cash flow from operations per share, EUR	1.41	0.96	2.00	2.05	2.25
Dividend per share, EUR 2)	0.23	0.29	0.29	0.27	0.25
Dividend payout ratio, % 2)	100.0	47.2	35.3	31.4	32.8
Dividend yield, % 2)	3.8	4.6	3.3	2.7	4.1
Equity per share, EUR 1)	7.57	7.27	7.16	6.53	5.77
Price per earnings per share (P/E) ratio 1)	26.57	10.30	10.60	11.43	8.00
Price per equity per share 1)	0.81	0.90	1.20	1.50	1.07
Price per cash flow per share	4.33	6.50	4.30	4.78	2.74
Dividend paid, EUR million 2)	29.6	36.8	36.8	34.7	30.5
Share price and turnover					
Share price, year high, EUR	6.90	10.60	10.34	10.09	6.71
Share price, year low, EUR	5.20	5.21	7.65	6.05	5.30
Share price, year average, EUR	5.85	8.06	9.01	8.06	6.02
Share price, end of year, EUR	6.11	6.24	8.61	9.81	6.17
Number of shares traded (1000), Helsinki	20,703	30,277	33,241	33,276	22,480
% of number of shares	16	24	26	27	19
Market capitalization, end of year, EUR million	780.9	803.6	1,109.2	1,262.9	741.5
Increase in share capital					
Average number of shares (1000) 3)	128,318	128,800	128,800	122,090	120,800
Number of shares at end of year (1000) 3)	127,800	128,800	128,800	128,800	120,800
Increases in number of shares (1000)	_	_	_	8,000	_
Share capital, EUR million	217.0	216.6	216.6	216.6	203.2
Increases in share capital, EUR million	_	_	_	13.5	

The change in accounting practice (IAS 12) reduced 1998 taxes by EUR 14.0 million.
 The 1999 dividend is the Board of Directors' proposal to the Annual General Meeting.
 Weighted average number of shares outstanding, adjusted by the number of shares bought back.

## FINANCIAL RATIOS

	1999	1998	1997	1996	1995
Income statement					
Net sales, EUR million Foreign operations, EUR million Sales in Finland, % Exports from Finland, % Sales generated outside Finland, % Operating income, EUR million % of net sales Net financing income and expenses, EUR % of net sales Interest cover Income before extraordinary items, EUR in % of net sales Extraordinary income and expenses, EUR	2 6 million 59 2	2,413 1,916 21 19 61 148 6 51 2 6 97 4	2,420 1,955 19 22 59 198 8 53 2 7 145 6	2,266 1,764 22 24 54 210 9 67 3 6 143 6	2,234 1,789 20 25 55 225 10 104 5 4 121 5
Income before taxes and minority interests, EUR million % of net sales Net income, EUR million <sup>1)</sup> Return on capital invested, % Return on equity, % <sup>1)</sup>	59 2 30 6 3	97 4 79 8 8	145 6 104 11 12	143 6 104 12 14	121 5 93 13 14
Cash flow					
Cash flow from operations, EUR million Sales of fixed assets, EUR million Capital expenditure, EUR million % of net sales Cash flow after capital expenditure, EUR million Cash flow return on capital invested, %	181 18 168 7 31 9	123 14 255 11 -119 7	257 61 211 9 107 14	250 26 202 9 73 14	272 62 156 7 179 15
Balance sheet					
Non-current assets, EUR million Shareholders' equity, EUR million <sup>1)</sup> Liabilities, EUR million Total assets, EUR million Net liabilities, EUR million Equity ratio, % <sup>1)</sup> Gearing, %	1,486 968 1,620 2,603 934 38 95	1,444 936 1,504 2,453 892 39 94	1,404 923 1,458 2,389 745 39 80	1,366 840 1,601 2,447 798 35 94	1,312 697 1,616 2,316 885 30 126
Personnel					
Personnel (average) of whom in Finland  Exchange rates	10,743 5,090	10,785 5,155	10,392 5,176	10,631 5,945	10,900 6,125
Key exchange rates (31 December) USD GBP NLG SEK DKK BEF FIM	1.00460 0.62170 2.20371 8.56250 7.43300 40.33990 5.94573	1.16674 0.70547 2.20371 9.48736 7.44892 40.33990 5.94573	1.09686 0.66122 2.12352 8.66346 7.48079 40.50225 5.94573	1.28033 0.75559 2.23322 8.81110 7.61395 41.03333 5.94573	1.36414 0.88202 2.18714 9.08300 7.56262 40.11940 5.94573

 $<sup>^{1)}</sup>$  The change in accounting practice (IAS 12) reduced 1998 taxes by EUR 14.0 million.

## CONSOLIDATED INCOME STATEMENT

		1.1. – 31.12.		
	Note	1999	1998	
		EUR million	EUR million	
Net sales	1, 28	2,526.2	2,412.7	
Share of associates' profits	2, 28	2.8	5.0	
Other income from operations	3	32.6	16.4	
Cost of sales	4, 5	-2,262.5	-2,115.3	
Depreciation	6, 28	-188.1	-170.7	
Operating income	28	111.0	148.1	
Financing income and expenses	7	-52.4	-50.7	
Income before extraordinary items, taxes				
and minority interests		58.6	97.4	
Extraordinary items	8	_	_	
Income before taxes and minority interests		58.6	97.4	
Direct taxes	9	-27.8	-19.3	
Income before minority interests		30.8	78.1	
Minority interest		-0.9	0.5	
Net income		29.9	78.6	
Earnings per share, EUR	10	0.23	0.61	

## CONSOLIDATED BALANCE SHEET

			31.12.
	Note	1999 EUR million	1998 EUR million
ASSETS			
Non-current assets	28		
Intangible assets	11	79.7	68.7
Tangible assets Investments	12	1,328.2	1,307.6
Holdings in associated companies	13	50.7	41.6
Other shares and holdings		8.4	7.9
Other investments		18.5	18.4
Total investments		77.6	67.9
Total non-current assets		1,485.5	1,444.2
Current assets	28		
Inventories	14	455.9	429.2
Receivables	15	22 /	10.0
Interest-bearing receivables Other interest-free receivables		23.4 549.7	18.2 466.0
Total receivables		573.1	484.2
Securities	22	42.4	39.9
Cash and bank	22	46.0	55.6
Total current assets		1,117.4	1,008.9
Total assets		2,602.9	2,453.1
			31.12.
	Note	1999 EUR million	1998 EUR million
LIABILITIES AND SHAREHOLDERS' EQUITY			
Shareholders' equity	16, 17		
Share capital		217.0	216.6
Share premium account Revaluation reserve		252.5 8.3	252.9 8.5
Own shares		-5.8	0.) =
Other reserves		4.2	3.8
Retained earnings		461.6	375.5
Net profit for the financial year		29.9	78.6
Total shareholders' equity		967.7	935.9
Minority interests		15.2	13.3
Long-term liabilities			
Interest-bearing long-term liabilities	18, 22	848.8	785.4
Deferred tax liabilities	19	56.6	63.5
Provision for liabilities and charges	20	39.2	44.0
Total long-term liabilities		944.6	892.9
Current liabilities	21 22	172 5	202.6
Interest-bearing short-term liabilities Interest-free short-term liabilities	22 28	173.5 501.9	202.6 408.4
Total current liabilities		675.4	611.0
Total liabilities		1,620.0	1,503.9
Total liabilities and shareholders' equity		2,602.9	2,453.1

## CONSOLIDATED CASH FLOW STATEMENT

	1999 EUR million	1998 EUR million
Funds from operations		
Operating income	111.0	148.1
Adjustments to operating income 1)	-6.5	1.3
Depreciation	188.1	170.7
Interest income	6.4	10.7
Interest expense	-56.2	-55.8
Dividend received	4.2	4.4
Other financing items	0.1	<b>−</b> 7.5
Extraordinary items	21 5	20.2
Taxes	-31.5	-38.2
Total funds from operations	215.6	233.7
Change in net working capital		
Inventories	-26.7	-45.1
Short-term receivables	-83.5	-18.7
Interest-free short-term liabilities	75.5	-47.2
Change in net working capital, total	<b>-34.7</b>	-111.0
Cash flow from operations	180.9	122.7
Capital expenditure		
Acquisitions of Group companies	<del>-4</del> .1	-76.9
Acquisitions of associated companies		-7.3
Purchase of other shares	-9.9	-0.3
Purchase of other fixed assets	-154.1	-171.0
Disposal of Group companies	_	0.2
Disposal of associated companies	<del>-</del>	4,9
Sales of other shares	0.3	0.4
Sales of other fixed assets	18.2	8.6
Total capital expenditure	-149.6	-241.4
Cash flow before financing	31.3	-118.7
Financing		
Change in long-term loans (increase +, decrease -)	18.6	60.0
Change in long-term loan receivables (increase -, decrease +)	0.6	4.9
Short-term financing, net (increase +, decrease -)	-20.2	52.6
Dividend paid	-36.8	-36.8
Other	<b>-0.6</b>	<u>-7.6</u>
Financing, total	-38.4	73.1
Increase / decrease in liquid funds	<b>-7.1</b>	-45.6
Liquid funds at end of year	88.4	95.5
Liquid funds at beginning of year	95.5	141.1
Increase / decrease in liquid funds	<b>-7.1</b>	-45.6

The above figures cannot be directly derived from the balance sheets owing to changes, e.g., in the Group structure and foreign exchange rates. The cash flows of the business areas are shown in the segment data (p. 34).

<sup>1)</sup> Non-cash flow items included in operating income (e.g. results of associated companies) and gains and losses on the sale of fixed assets.

## SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Basis of presentation

The Kemira Group's financial statements have been prepared in compliance with the relevant acts and regulations in force in Finland and in accordance with the Group's uniform accounting principles. The Group's accounting principles are based on International Accounting Standards (IAS). Accordingly, the financial statements also correspond to IAS, with the exception of accounting for pension expenses, IAS 19, which entered into force on 1 January 1999. Its effects on the consolidated income statement and shareholders' equity are discussed and presented in Notes 23 and 24 to the consolidated financial statements.

## Principles of consolidation

The consolidated financial statements include the accounts of the parent company, Kemira Oyj, and companies in which it owns, directly or indirectly through subsidiaries, over 50 percent of the voting rights. Certain real estate and housing companies, and captive insurance companies, as well as companies that had no operations during the financial year, have not been consolidated. However, the effect of these companies on the Group's results and distributable reserves, in cases of any significance, has been consolidated using the equity method of accounting. Companies acquired during the accounting period are consolidated from the date the responsibility for their operations was transferred to the Group. Similarly, units or companies sold during the fiscal year are included in the income statement up to the date of disposition.

All intra-Group transactions have been eliminated as part of the consolidation process. Acquisitions of companies are accounted for under the purchase (past-equity) method of accounting. The excess of the acquisition cost over fair value of the net assets acquired is recorded as goodwill. Goodwill is amortized over the useful life of the assets acquired, which since 1998 has as a rule been a maximum of 5 years. Should a longer amortization period be justified, it is a maximum of 10 years. The interests of minority shareholders in the net assets and profit and loss of consolidated subsidiaries is reflected as a separate item in the Group's consolidated balance sheet and income statement.

Companies in which the Group has a participating interest are associated companies, in which the interest is 20-50%. Holdings in associated companies are presented in the consolidated financial statements using the equity method of accounting. Under the equity method the Group's proportionate share of the associated companies' net income for the financial year is included in income and expenses from operations. Joint ventures that are owned on a fifty-fifty basis with another shareholder and in which the voting rights and management responsibility are divided evenly between the shareholders have been consolidated according to the proportionate method of accounting. Other companies (voting rights owned less than 20 percent) are stated at cost in the balance sheet and dividends received are included in the income statement.

## Items denominated in foreign currency, and foreign currency and interest rate derivatives

In day-to-day accounting of each Group company, transactions in foreign currencies are translated at the rates of exchange prevailing on the dates of the transactions. At the end of the accounting period the unsettled balances of foreign currency transactions are valued at the rates of exchange prevailing on the balance sheet date. Foreign exchange gains and

losses related to normal business operations are treated as adjustments to sales and purchases, while those gains and losses associated with financing and hedging of the total foreign exchange position are recorded as financing income and expenses.

Derivative financial instruments to hedge currency and interest rate risks have been recorded in the income statement simultaneously with the commitment hedged. Derivative financial instruments which are not considered as hedging instruments are valued in the financial statements at the market price in accordance with conservative accounting practice. The interest portion of currency forwards is recorded as interest income and expense over the terms of the contract, and the differences in the foreign exchange rates are booked as a credit or charged to income when the underlying hedged transaction has been credited or charged to income in the financial statements.

In the consolidated financial statements, the income statements of foreign subsidiaries have been translated into euro amounts using the average exchange rates and the balance sheets have been translated using the year-end exchange rates. The translation difference, which arises in translating the income statement and balance sheet using the different exchange rates, is entered in non-restricted equity.

The Group seeks to hedge the translation risk of its investment in the net assets of foreign subsidiaries, which includes the original cost of ownership plus any undistributed post-acquisition profits and losses of those subsidiaries. Accordingly, the foreign currency-denominated shareholders' equity in the Group's non-Finnish subsidiaries are hedged against exchange rate changes using long-term foreign currency-denominated loans as well as forward and currency swap contracts. In the consolidated financial statements, the exchange rate gains and losses of such loans and forward and currency swap contracts are credited or charged against the translation differences arising from the translation of the shareholders' equity amounts of the last confirmed balance sheets of the subsidiaries. Other translation differences affecting shareholders' equity are stated as an increase or decrease in the non-restricted shareholders' equity.

The foreign exchange rates on the balance sheet date are given on page 17.

## Pension arrangements

The Group has various pension schemes in accordance with the local conditions and practices in the countries in which it operates. The schemes are generally funded through payments to separate funds or to insurance companies. Contributions are based on periodic actuarial calculations and are charged against profits.

The parent company's pension arrangements have been handled within the separate pension funds. The uncovered liabilities of pension funds are presented in the parent company's financial statements in short-term interest-free receivables and in short-term interest-free liabilities.

In 1999, IAS 19 was not applied, but the effect of applying the standard on the Group's net income and retained earnings has been calculated and stated in Notes 23-24. The liability resulting from the changeover to applying IAS 19, which came into force in 1999, has been calculated at the Group level so that the accumulated entitlement has been periodized over the time of the employment according to the accrual rules for

pension arrangements (Projected Unit Credit method). The pension calculations are based on studies carried out by actuaries.

#### Net sales

Net sales include the total invoicing value of products sold and services provided less sales tax, discounts, rebates and foreign exchange differences in accounts receivable.

### Extraordinary income and expenses

Extraordinary income and expenses consist of items not incurred in the normal course of business, such as exceptionally large one-time expenses arising from the closures of plants and the reorganization of operations and divestments of entire businesses.

Income and expenses of recurring nature and connected with operations, for example, gains and losses on the sales of fixed assets, are included in operating income.

Extraordinary items of the parent company include Group contributions received and paid.

#### **Direct taxes**

The consolidated financial statements include direct taxes, which are based on the taxable results of the Group companies for the accounting period calculated according to local tax rules, and the change in the deferred tax liability and asset.

The Group's deferred tax liabilities and assets have been calculated according to IAS 12 which came into force from the beginning of 1998 and which is allowed by the Finnish legislation. The deferred tax liability has been calculated for all significant temporary differences, which have been obtained by comparing the book value of each balance sheet item and the taxation value. Deferred tax assets are included in the financial statements only if the company considers that the temporary difference or tax loss will probably be realized in the near future and that the taxable unit will probably generate a sufficient amount of taxable income in order to be able to make use of the tax claim. Tax assets on confirmed losses have been stated observing particular caution. In calculating the deferred tax liability, the tax rate enacted at the time of preparing the financial statements has been applied.

The effect of the change that has been made in calculating taxes has been reported in its entirety in the direct taxes for 1998 and for revaluation items it is included directly in shareholders' equity. The figures for comparison years have not been changed. The effect of the change on taxes for 1998 is discussed in the Notes to the financial statements.

The tax charged in the income statement of the parent company comprises direct taxes calculated on an accrual basis. The untaxed reserves of the parent company are shown as a separate item. Provision for deferred tax liability for the untaxed reserves has not been made in the balance sheet of the parent company.

## Research and development expenditure

Research expenditure is expensed. Development expenditure is also expensed except for major projects for which investment decisions have been made. These are capitalized. Capi-

talized development costs are presented in the item "Other long-term expenditures" and amortized over their economic life, not exceeding, however, five years.

## Fixed assets and depreciation

Non-current (fixed) assets are generally stated at cost, except for certain land and water areas and buildings which are stated at revalued amounts, less accumulated depreciation, as applicable.

Depreciation is calculated on a straight-line basis so as to write off carrying value of fixed assets over their expected useful lives. The depreciation periods adopted are as follows:

Machinery and equipment
Buildings and constructions
Other capitalized expenses
Goodwill on consolidation

3–15 years
25 years
5–10 years
5–10 years

As a general rule, interest expense is not capitalized, except in the United States. However, interest expenses related to capital borrowed to finance major capital investment projects can, when specifically approved by the Board, be capitalized as part of the total investment costs.

Gains and losses on the sale of fixed assets are included either in income and expenses of operations or in extraordinary items, depending on the nature of the transaction. In recent years, new revaluations have not been made within the Group.

#### Large, seldom performed maintenance works

Large, seldom performed maintenance works are treated as a capital expenditure as from 1999 and acquisition costs are depreciated over their useful lifetimes (IAS 37). Previously, provisions for expenses were booked for them in advance. The effect of the change on net income and shareholders' equity is stated in Note 16.

## Leasing

Leasing payments are treated as rental expenses except for finance leasing agreements, in which the leased property is presented as part of the Group's fixed assets and the leasing debt is shown as a long-term liability. In respect of finance leasing agreements, the depreciation on the leased property and the interest expense on the debt are shown in the income statement instead of leasing rents.

### **Inventories**

Inventories are stated at the lower of cost or net realizable value. Cost is determined on a first in first out (FIFO) basis. Net realizable value is the amount which can be realized from the sale of the asset in the normal course of business, after allowing for the costs of realization. The cost of finished goods and work in process include an allocable proportion of production overheads.

## Securities and other short-term investments

Securities and other short-term investments are a part of the Group's cash management and are stated at lower of cost or market.

INCOME STATEMENT (EUR million)	1999	1998
1. NET SALES		
Net sales by division		
Kemira Chemicals	697.0	629.7
Tikkurila	357.5	360.5
Kemira Agro	1,014.7	1,030.3
Kemira Pigments	488.5	422.9
Other operations	84.5	84.4
Intra-Group invoicing	-116.0	-115.1
Total	2,526.2	2,412.7
		1 , 1
Distribution of net sales by geographic market a Finland	ireas, as a percentage of tot 18	ai net saies 21
Other European Union countries	52	53
Other European countries	8	8
North and South America	13	11
Asia	7	5
Other countries	$\overset{'}{2}$	2
Total	100	100
2. SHARE OF ASSOCIATES' PROFITS		
2. SHARE OF ASSOCIATES TROFITS		
Share of associates' profits	4.9	5.8
Share of associates' losses	-2.1	-0.8
Total	2.8	5.0
Total	2.0	
3. OTHER INCOME FROM OPERATIONS		
Gains on the sale of fixed assets	14.1	3.2
Sales of scrap and waste	0.5	0.2
Insurance compensation	10.1	2.6
Income from royalties, knowhow and licences	0.5	3.6
Rent income	3.0	2.6
Other income	4.4	4.2
Total	32.6	16.4
_ <del></del>	<i>y</i>	10.1

The capital gain on the sale of fixed assets in 1999 includes a EUR 9.2 million gain on the disposal of shares in power utilities.

## 4. COST OF SALES

Change in inventories of finished goods Own work capitalized <sup>1)</sup>	-6.1 -6.6	-20.5 -5.2
Materials and services		
Materials and supplies		
Purchases during the financial year	1,075.9	1,124.8
Change in inventories of materials and supplies	1.1	-22.1
External services	<b>85.</b> 7	23.9
Total materials and services	1,162.7	1,126.6
Personnel expenses	456.6	439.1
Rents	34.3	23.9
Losses on the sales of fixed assets	0.3	-1.1
Other expenses	621.3	552.5
Total	2,262.5	2,115.3

In 1999 costs included a reduction in long-term provision for liabilities and charges in a total amount of EUR 4.8 million (an increase of EUR 1.9 million in 1998).

<sup>&</sup>lt;sup>1)</sup> Own work capitalized comprises mainly wages, salaries and other personnel expenses and changes in inventories relating to self-constructed fixed assets for own use.

INCOME STATEMENT (EUR million)	1999	1998
5. PERSONNEL EXPENSES AND NUMBER OF PERSONNEL		
Emoluments of the Supervisory Board	_	_
Emoluments of boards of directors and managing directors <sup>1)</sup>	8.3	8.2
Other wages and salaries	344.8	329.5
Pension expenses	40.6	40.2
Other personnel expenses	62.9	61.2
Total	456.6	439.1

<sup>&</sup>lt;sup>1)</sup> Profit sharing bonuses to the management were EUR 0.5 million in 1999 and EUR 0.7 million in 1998

## Management's pension commitments

The managing director and deputy managing director of Kemira Oyj are entitled to retire at the age of 60. This possibility is based on the benefits of the supplementary pension foundation that has been closed to new members since 1 January 1991. The supplementary pension foundation's benefits concern all the personnel whose years of service and other conditions concerning the granting of a pensions have been fulfilled. Similar arrangements have been made in the other Group companies.

Personnel, average		
Kemira Chemicals	3,138	3,114
Tikkurila	2,301	2,214
Kemira Agro	2,951	3,071
Kemira Pigments	1,752	1,794
Other companies	601	592
Total	10,743	10,785
Personnel in Finland, average	5,090	5,155
Personnel outside Finland, average	5,653	5,630
Total	10,743	10,785

The total personnel of joint ventures that have been consolidated according to the proportionate method of accounting was in average 279 (206 in 1998).

Personnel at year end	10,436	10,508
6. DEPRECIATION		
Scheduled depreciation		
Intangible assets		
Intangible rights	2.0	1.6
Goodwill	1.2	1.1
Goodwill on consolidation	4.5	4.2
Other long-term expenditures	6.1	4.0
Tangible assets		
Buildings and constructions	23.5	22.7
Machinery and equipment	145.5	133.7
Other tangible assets	5.3	3.4
Total	188.1	170.7

Scheduled depreciation for goodwill on consolidation was EUR 4.5 million (EUR 4.2 million in 1998). No depreciation has been made in the negative goodwill in 1999 and 1998.

## 7. FINANCING INCOME AND EXPENSES

Financing income		
Dividend income	0.7	1.1
Interest income from long-term investments	1.1	0.7
Other interest income	5.3	7.8
Other financing income	0.5	0.4
Total	7.6	10.0

INCOME STATEMENT (EUR million)	1999	1998
Financing expenses		
Interest expenses	-56.2	-53.6
Other financing expenses	-2.2	-1.6
Exchange losses	<b>-1.6</b>	-5.5
Total	-60.0	-60.7
Total financing income and expenses	-52.4	-50.7
Net financing expenses as a percentage of net sales	2.1	2.1
Net interests as a percentage of net sales	2.0	1.9
Exchange gains and losses		
Realized	1.8	2.8
Unrealized	-3.4	-8.3
Total	-1.6	-5.5

Interest expenses were not capitalized during the 1999 financial year. In 1998 capitalized interest expenses amounted to EUR 0.1 million.

The exchange differences on foreign currency loans and foreign currency derivatives have been credited or charged directly to shareholders' equity and matched against the translation differences arising from the consolidation of foreign subsidiaries according to the so called equity hedging method. In 1999 these foreign exchange losses totalled EUR 11.4 million (in 1998 foreign exchange gains were EUR 3.1 million).

There were no financing income and expenses from associates.

## 8. EXTRAORDINARY ITEMS

There were no extraordinary income or expenses in 1999 and 1998.

#### 9. DIRECT TAXES

Direct taxes, current year	-30.9	-37.7
Direct taxes, previous years	-0.5	-0.5
Deferred taxes	3.6	4.9
Tax related to changes in accounting practices	_	14.0
Total	-27.8	-19.3

Deferred tax liabilites and tax assets have been calculated according to IAS regulations, effective from 1 Jan. 1998. The change in accounting practises has reduced taxes EUR 14.0 million in the 1998 income statement. In addition a EUR 9.4 million tax liability has been calculated for previous years' revaluations. This amount has been deducted from the 1998 equity.

There were no calculated tax expenses related to extraordinary items in 1999 and in 1998.

Certain Group subsidiaries have tax losses which can be applied against future taxable income. According to the principle of prudence, all tax losses have not been entered as deferred tax assets because there is uncertainty regarding the extent to which they can be used.

## 10. EARNINGS PER SHARE

Income before extraordinary items and taxes	58.6	97.4
Minority interests	-0.9	0.5
Direct taxes of the financial year	-27.8	-19.3
Net income	29.9	78.6
Weighted average number of shares 1)	128,318,000	128,800,000
Earnings per share, EUR	0.23	0.61

<sup>1)</sup> Weighted average number of shares outstanding, adjusted by the number of shares bought back.

## **BALANCE SHEET** (EUR million)

11. INTANGIBLE ASSETS	Intangible rights	Goodwill	Goodwill on consoli- dation 1)	Other long- term expen- ditures	Advances paid	1999 total	1998 total
Acquisition cost at beginning of year	31.6	12.7	71.8	62.9	0.3	179.3	148.6
Increases	2.4	1.2	0.8	16.6	_	21.0	36.2
Decreases	_	_	_	_	_	_	-0.7
Exchange differences and other changes	_	0.2	-0.6	5.0	0.1	4.7	-4.8
Acquisition cost at end of year	34.0	14.1	72.0	84.5	0.4	205.0	179.3
Accumulated depreciation at							
beginning of year	-22.0	-5.9	-45.4	-37.3	_	-110.6	-104.5
Accumulated depreciation relating to							
decreases and transfers	_	_	_	_	_	_	-0.6
Depreciation during the financial year	-2.0	-1.2	-4.5	-6.1	_	-13.8	-10.9
Exchange differences and other changes	0.2	_	0.2	-1.3	_	-0.9	5.4
Accumulated depreciation at end of year	-23.8	-7.1	-49.7	-44.7	_	-125.3	-110.6
Net book value at end of year	10.2	7.0	22.3	39.8	0.4	79.7	68.7

<sup>1)</sup> There was no goodwill on consolidation or negative goodwill on consolidation related to associates in 1999.

12. TANGIBLE ASSETS	Land and water areas <sup>1)</sup>	Buildings and construc- tions 2)	,	Other tangible assets	Advances pai and fixed assets under construction	total	1998 total
Acquisition cost at beginning of year	98.6	601.3	2,361.1	88.1	66.2	3,215.3	3,136.8
Increases	0.6	21.7	110.6	7.0	-2.8	137.1	211.6
Decreases	-0.3	-1.1	-3.1	_	_	<b>-4.5</b>	-3.7
Exchange differences and other changes	5.4	-15.8	27.7	-2.4	1.4	16.3	-129.4
Acquisition cost at end of year	104.3	606.1	2,496.3	92.7	64.8	3,364.2	3,215.3
Accumulated depreciation at							
beginning of year	_	-296.0	-1,561.0	-50.7	_	-1,907.7	-1,847.4
Accumulated depreciation relating to							
decreases and transfers	_	0.3	-4.9	_	_	<b>-4.6</b>	29.4
Depreciation during the financial year	_	-23.5	-145.5	-5.3	_	<b>-174.3</b>	-159.8
Exchange differences and other changes	_	23.9	24.2	2.5	_	50.6	70.1
Accumulated depreciation at end of year	_	-295.3	-1,687.2	-53.5	_	-2,036.0	-1,907.7
Net book value at end of year	104.3	310.8	809.1	39.2	64.8	1,328.2	1,307.6

<sup>1)</sup> The acquisition cost and book value of land and water areas include EUR 23.3 million revaluations in 1999 and in 1998.

<sup>&</sup>lt;sup>3)</sup> Non-depreciated capitalized interest expenses included in buildings were EUR 0.5 million in 1999 (EUR 0.4 million in 1998), in machinery and equipment EUR 2.4 million in 1999 (EUR 2.3 million in 1998). Interest expenses were not capitalized in 1999. Interest expenses capitalized on machinery and equipment in 1998 amounted to EUR 0.1 million.

13. INVESTMENTS	Holdings in associates	Other shares and holdings	Receivables from associates	Other investments	1999 total	1998 total
Acquisition cost at beginning of year	41.6	7.9	0.8	17.6	67.9	70.5
Share of net income of associates	1.5	_	_	_	1.5	3.0
Increases	9.7	0.3	_	_	10.0	7.6
Decreases	_	-0.3	_	_	-0.3	-5.4
Transfers	_	_	_	_	_	-1.9
Exchange differences and other changes	-2.1	0.3	0.1	_	<b>-1.7</b>	-0.8
Reduction in value	_	0.2	_	_	0.2	-0.3
Receivables from associates	_	_	_	_	_	0.3
Other receivables	_	_	_	_	_	-5.1
Net book value at end of year	50.7	8.4	0.9	17.6	77.6	67.9

Shares and holdings are specified in Note 27.

14. INVENTORIES	1999	1998
Materials and supplies	187.1	165.8
Work in process	15.1	19.0
Finished goods	252.3	241.8
Advances paid	1.4	2.6
Total	455.9	429.2

 $<sup>^{2)}</sup>$  The acquisition cost of buildings and constructions include EUR 20.1 million revaluations in 1999 and in 1998. Book value was EUR 8.6 million at the end of 1999 and EUR 9.5 million at the end of 1998.

None   Procession   Processio	BALANCE SHEET (EUR million)			199	9		1998
Interest-bearing long-term receivables   0.1	15. RECEIVABLES						
Prepaid expenses and accrued income from others   4.3   0.0     Accounts receivable from others   0.8   0.6     Total interest-free long-term receivables   10.6   10.7   12.6     Total long-term receivables   10.6   10.7   12.6     Total long-term receivables   10.7   12.6     Current receivables from associates   2.6   −	Interest-bearing long-term receivables Loan receivables from associates Loan receivables from others Other receivables from others	ables					0.1 0.1
Name	Prepaid expenses and accrued incon Accounts receivable from others Other receivables from others Total interest-free long-term receivable		others	5. 0. 10.	5 8 6		10.7 0.6 11.6
Interest-free short-term receivables   Accounts receivable from associates   Accounts receivable from others   Accounts receivables from others   Accounts receivables from others   Accounts receivables from others   Accounts receivables from associates   Accounts receivables from associates   Accounts receivables from associates   Accounts receivables from others   Accounts receivables   Accounts from others   Accounts from others from others   Accounts from others f	Interest-bearing short-term receivables Loan receivables from associates Loan receivables from others Other receivables from others			9. 11.	5 3		14.0
Total interest-free short-term receivables         539.0         454.4           Total current receivables         562.4         471.6           Total receivables         573.1         484.2           Loans to the management of the Group companies         −         0.1           Share capital premium account         Share premium account other funds         Translation reserve and other funds         Retained earnings         Total preserve and other funds         Total preserve and other funds         Total preserve and other funds         Translation reserve and other funds         Total preserve and other funds         Translation preserve and other funds         Translation preserve and other funds         Translation preserve and other funds         Total preserve and other funds         Translation preserve and	Interest-free short-term receivables Accounts receivable from associates Accounts receivable from others Advances paid from others Prepaid expenses and accrued incoording of the control of the receivables from associates		others	4. 471. 2. 22. 0.	1 6 7 5		3.6 393.3 1.8 26.0 0.2
Total receivables		es					
Transfers   Capital principles   Share capital principles   Share premium reserve and other funds   Translation reserve and other funds   Transl	Total current receivables			562.	4		471.6
Shareholder's equity at 1 Jan. 1998   Change in accounting principles   Counting   Cou	Total receivables			573.	1		484.2
Shareholder's equity at 1 Jan. 1998   Change in accounting principles   Counting   Cou	Loans to the management of the G	roup com	panies		_		0.1
Share capital         Share premium premium account         Revaluation reserve and other funds         Translation reserve and other funds         Retained earnings           Shareholder's equity at 1 Jan. 1998         216.6         252.9         17.9         -18.3         454.2         923.3           Change in accounting principles 10         -         -         -         -         -         -9.2         -9.2           Net profit for the financial year         -         -         -         -         -         -9.2         -9.2           Dividends paid         -         -         -         -         -         -36.8         -36.8           Exchange differences         -         -         -         -         -         -36.8         -36.8           Exchange differences         -         -         -         -         -18.6         -         -18.6           Other changes         -         -         -         -1.0         -         -0.4         -1.4           Transfers         -         -         -         -4.6         -         491.0         935.9           Shareholder's equity at 1 Jan. 1999         216.6         252.9         12.3         -36.9         491.0         935.9	G	•	•				
Change in accounting principles <sup>1)</sup> -       -       -       -       -9.2       -9.2         Net profit for the financial year       -       -       -       -       78.6       78.6         Dividends paid       -       -       -       -       -       -36.8       -36.8         Exchange differences       -       -       -       -       -18.6       -       -18.6         Other changes       - <t< th=""><th>16. SHAREHOLDERS' EQUITY</th><th></th><th>premium</th><th>reserve and</th><th></th><th></th><th>Total</th></t<>	16. SHAREHOLDERS' EQUITY		premium	reserve and			Total
Shareholder's equity at 1 Jan. 1999       216.6       252.9       12.3       -36.9       491.0       935.9         Change in accounting principles 1)       -       -       -       -       18.6       18.6         Net profit for the financial year       -       -       -       -       29.9       29.9         Dividends paid       -       -       -       -       26.8       -36.8       -36.8         Exchange differences       -       -       -       26.6       -       26.6         Own shares       -       -       -       -       -5.8       -5.8         Other changes       -       -       0.2       -       -0.9       -0.7         Transfers       0.4       -0.4       -       -       -       -       -	Change in accounting principles <sup>1)</sup> Net profit for the financial year Dividends paid Exchange differences Other changes Transfers	- - - - -	- - - -	-1.0 -4.6	-18.6 -	-9.2 78.6 -36.8 - -0.4	-9.2 78.6 -36.8 -18.6 -1.4
Change in accounting principles 1)       -       -       -       -       18.6       18.6         Net profit for the financial year       -       -       -       29.9       29.9         Dividends paid       -       -       -       -36.8       -36.8         Exchange differences       -       -       -       26.6       -       26.6         Own shares       -       -       -       -       -5.8       -5.8         Other changes       -       -       0.2       -       -0.9       -0.7         Transfers       0.4       -0.4       -       -       -       -       -	Shareholder's equity at 31 Dec. 1998	216.6	252.9	12.3	-36.9	491.0	935.9
	Change in accounting principles <sup>1)</sup> Net profit for the financial year Dividends paid Exchange differences Own shares Other changes	- - - - -	- - - -	- - -	<u>-</u>	18.6 29.9 -36.8 - -5.8	18.6 29.9 -36.8 26.6 -5.8
				12.5	-10.3	496.0	967.7

<sup>&</sup>lt;sup>1)</sup> The change in accounting principles includes a charge of EUR 9.2 million for the deferred tax liability on revaluations (IAS 12) in 1998, and an increase in equity of EUR 18.6 million after taxes for the change in accounting policy for major maintenance works (IAS 37). The change in accounting policy for maintenance works, after tax, was a charge of EUR 0.1 million in the income statement in 1999.

### **BALANCE SHEET** (EUR million)

The Group's non-restricted shareholders' equity, which limits the parents company's dividend payout, was EUR 351.4 million in 1999 and EUR 318.1 million in 1998. This figure is obtained by adding to retained earnings the net income for the financial year and subtracting from it the proportion of untaxed reserves which has been transferred to shareholders' equity and own shares. Research, establishment and development expenses that have a limiting effect on the distribution of profits have not been capitalized in the balance sheet.

Details of the company's breakdown of shareholders' equity and the regulations of the Articles of Association are given on page 14. In 1999 the company purchased 1,000,000 of its own shares, which represent 0.8% of the aggregate votes conferred by all the shares and 0.5% of the share capital.

### 17. APPROPRIATIONS

In the consolidated financial statements the appropriations of each individual company have been divided into equity and deferred tax liability. Appropriations in the balance sheets of the Group companies are accumulated depreciation difference.

	1999	1998
Of which equity	134.3	136.0
Of which deferred tax liability	54.8	53.8
Total accumulated depreciation difference	189.1	189.8
18. LONG-TERM INTEREST-BEARING LIABILITIES		
Debentures and other bond loans	61.7	61.7
Loans from financial institutions	398.6	293.2
Loans from pension institutions	296.4	334.1
Other long-term liabilities to associated companies	0.4	_
Other long-term liabilities to others	91.7	96.4
Total	848.8	785.4
Long-term interest-bearing liabilities maturing in		
2001 (2000)	44.6	29.8
2002 (2001)	33.6	50.5
2003 (2002)	192.8	39.8
2004 (2003)	150.7	175.7
2005 (2004) or later	427.1	489.6
Total	848.8	785.4
Interest-bearing liabilities maturing in 5 years or longer		
Loans from financial institutions	99.7	145.2
Loans from pension institutions	283.9	274.9
Other long-term interest-bearing liabilities	43.5	69.5
Total	427.1	489.6

Other long-term liabilities include a EUR 0.1 million issue of bonds with warrants offered to senior management. The issue is described in greater detail on page 10.

Long-term loans by currency, %		
EUR	35	_
FIM	18	46
SEK	15	14
BEF	1	7
USD	11	9
DKK	5	6
GBP	7	7
NLG	_	6
DEM	_	2
Other	8	3
Total	100	100

The Group has no convertible bonds.

BALANCE SHEE	ET (EUR million)		1999	1998
Debentures and	d other bond k	oans		
Loan		Loan currency		
FI 0003008581	1998-2003	EUR	45.2	45.2
FI 0003008599	1998-2006	EUR	16.5	16.5
Total			61.7	61.7
19. DEFERRED	TAX LIABILITII	ES		
Deferred tax liab	oilities		82.3	82.6
Deferred tax asso	ets		25.7	18.9
Net deferred tax	liabilities		56.6	63.5
Temporary differ	rences		9.1	14.7
Untaxed reserves	S		<b>54.8</b>	53.8
Consolidation en	ntries		<b>-7.3</b>	-5.0
Total			56.6	63.5

Deferred tax liabilities and tax assets have been calculated according to IAS regulations, effective from 1 January 1998.

The deferred tax liabilities related to untaxed reserves of the Finnish Group companies amounted to EUR 54.8 million in 1999 and EUR 53.8 million in 1998. The deferred tax assets are mainly tax assets from tax losses, finance lease and intra-Group profits.

### 20. PROVISION FOR LIABILITIES AND CHARGES

Pension liabilities		
Uncovered liabilities of pension funds	0.4	0.7
Other pension liabilities	18.3	22.8
Total	18.7	23.5
Other provisions for liabilities and charges		
Provisions for reorganization	7.0	6.8
Provision for accidents and environmental liabilities	7.5	6.8
Other provisions	6.0	6.9
Total	20.5	20.5
Total provision for liabilities and charges	39.2	44.0

Provisions for liabilities and charges are expected to fall due in a year at the earliest. Short-term provisions (EUR 20.8 million in 1999 and EUR 12.4 million in 1998 ) are included in accrued expenses and prepaid income.

## 21. CURRENT LIABILITIES

Interest-bearing short-term liabilities		
Loans from financial institutions	28.6	40.0
Loans from pension institutions	3.2	3.8
Current portion of other long-term loans to others	19.4	21.5
Bills of exchange from others	2.4	2.1
Other interest-bearing short-term liabilities to associates	1.2	0.5
Other interest-bearing short-term liabilities to others	<b>118.7</b>	134.7
Total interest-bearing short-term liabilities	173.5	202.6
Interest-free short-term liabilities		
Advances received from others	18.5	17.1
Accounts payable to associates	0.8	0.6
Accounts payable to others	235.3	195.5
Accrued expenses and prepaid income to others	202.3	168.2
Other interest-free short-term liabilities to others	45.0	27.0
Total interest-free short-term liabilities	501.9	408.4
Total current liabilities	675.4	611.0

## Accrued expenses

Accrued expenses and prepaid income in 1999 include mainly salaries, personnel expenses, interests and taxes.

BALANCE SHEET (EUR million)	1999	1998
22. NET LIABILITIES		
Interest-bearing long-term liabilities	848.8	785.4
Interest-bearing short-term liabilities	173.5	202.6
Securities	<b>-42.4</b>	-39.9
Cash and bank	<b>-46.0</b>	-55.6
Total	933.9	892.5
23. PENSION LIABILITIES ACCORDING TO IAS 19		
Present value of funded obligations as at 31.12.1998	830.4	_
Fair value of plan assets as at 31.12.1998	-836.9	_
Present value of unfunded obligations as at 31.12.1998	6.1	_
Net liability in the balance sheet as at 31.12.1998	-0.4	_
Increase in the liability in 1999	7.7	_
Liability at 31.12.1999	7.3	_
Increase in the net liability is the following:		
Current service cost	10.6	_
Interest on obligation	44.4	_
Expected return on plan assets	<b>-40.9</b>	_
Otĥer	0.5	_
Contributions to pension plans	-6.9	_
Total	7.7	

## 24. THE FINANCIAL IMPACT OF IAS 19

If IAS 19 had been applied in the consolidated financial statements and the increase in liabilities resulting from the changeover had been entered in its entirety in the income statement, earnings for 1999 would have been EUR 7.7 million smaller, shareholders' equity EUR 7.3 million smaller (EUR 0.4 million larger at 31 December 1998) and net debt EUR 7.3 million larger (EUR 0.4 million smaller at 31 december 1998) than in the financial statements prepared at 31 December 1999.

## 25. COLLATERAL AND CONTINGENT LIABILITIES

Loans secured by mortgages in the balance sheet and for which mortgages given as collateral Loans from financial institutions Mortgages given	10.0 9.9	8.2 9.9
Loans from pension institutions Mortgages given	89.1 110.9	111.2 142.1
Other loans Mortgages given	6.6 6.9	1.1 5.7
Total mortgage loans Total mortgages given	105.7 127.7	120.5 157.7
Contingent liabilities Assets pledged On behalf of own commitments On behalf of others	7.0 1.1	10.4 1.1
Guarantees On behalf of associates On behalf of others Leasing obligations <sup>1)</sup>	39.7 4.2 5.1	24.4 8.3 4.8
Other obligations On behalf of associates On behalf of others	1.2 1.0	1.1 1.0

In liabilities there are EUR 55.5 million of debts related to finance lease.

There were no collaterals or contingent liabilities related to managing directors, members or deputy members of board of directors and supervisory board.

#### Litigation

The Group has extensive international operations and is a defendant or plaintiff in a number of proceedings incidental to those operations. The Group does not expect the outcome of any legal proceedings currently pending, either individually or in the aggregate, to have material adverse effect upon the Group's consolidated financial position or results of operations.

<sup>1)</sup> Commitments for paying leasing rents in future years total EUR 13.8 million.

#### 26. MANAGEMENT OF FINANCIAL RISKS

The Group's Treasury functions are managed on a centralized basis. Treasury Management functions as an internal bank via which the subsidiaries handle all their borrowing, investment and hedging needs. Treasury Management also sees to the investment of liquid funds, the management of interest rate and foreign exchange risk as well as the maintenance of cash pools. The policy of Kemira's Treasury operations is approved by the company's Board of Directors. In addition, the Management Board confirms an action plan for treasury operations each year. The objective of financial risk management is to protect the company from unfavourable changes occurring in the financial markets and thus to contribute to safeguarding the company's earnings trend and its shareholders' equity. The company employs various financial instruments, such as forward rate agreements, options and futures, within the framework of the limits which have been set. Only such instruments are used whose market values and risks can be tracked continually and reliably within the company's risk management system. Derivative instruments are used only for hedging purposes, not for speculative gain.

#### Foreign exchange risk

The introduction of the euro has reduced the Group's currency flow exposure. The majority of the Group's production in the euro zone is also sold within the area. Currency flow risk nevertheless arises from net currency flows in other currencies than the home currency, both within and outside of the euro zone. Also, the translation into euro of the result and balance sheet items of companies outside of the euro zone causes currency risk.

Currency flow exposure is hedged selectively in such a way that already assured foreign currency flows are hedged completely and a part of the forecast cash flows are hedged, to an increasing extent, the more probable it is that the flow will materialize. The basic guideline is that a minimum of 30% of the foreign currency flow that is forecast for the next 12 months must be hedged. Each subsidiary is separately responsible for taking its own hedging decisions. The hedging undertaken by the subsidiaries is supplemented, according to the Group's needs, by means of Group-level hedging measures that are carried out by Group Treasury and for which the limit set for 1999 was EUR 35 million. On a monthly basis, an average of about EUR 14 million of this limit was in use. As part of this position, measures are taken to ensure that both external and internal borrowing and lending in foreign currency are nearly fully in balance. Hedging measures at the Group level had limits relating to both the nominal value and the market value, and the actual figures were tracked daily. In future the monitoring of currency flow exposure will be changed because as a rule 50 % of the net foreign currency flow that is forecast for the next twelve months will be hedged. This includes both hedging orders submitted

by subsidiaries and hedging at the group level. Treasury Management has an authorisation to diverge by +/- EUR 100 million from this 50 % level. The hedging of this forecast cash flow must nevertheless always be a minimum of 30 % and a maximum of 100 %. Use of the limits are tracked daily. In 1999 the total volume of all external foreign exchange contracts and options was about EUR 4000 million. This figure includes transactions made both on behalf of subsidiaries and at the group level.

The Group strives to hedge balance sheet risk by keeping foreign currency-denominated liabilities in balance, currency by currency, with the asset items in the balance sheet. The foreign currencydenominated shareholders' equity items of subsidiaries are hedged against foreign exchange fluctuations in accordance with the so-called equity hedging method by means of long-term foreign currency-denominated loans as well as by forward rate agreements and currency swaps. Because euro interest rates are clearly lower than, say, the interest rates for the US dollar and the British pound, balance sheet hedging by means of foreign currency loans results in a substantial cost, which is taken into account when taking decisions regarding hedging. In hedging balance sheet risk, the equity ratio was monitored such that if a change of +/- 2.5% in the foreign exchange rates caused a one percentage point change in the equity ratio, hedging measures had to be undertaken. For 2000, the new range of fluctuation for changes in foreign exchange rates is +/- 5 %, which may cause a max. 1.5 persentage point change in the equity ratio. In practice this means that in the balance sheet the value of unhedged shareholders' equity could be a maximum of EUR 500 million in 1999, whereas in future this limit will be EUR 375 million. The degree of hedging of shareholders' equity in currencies outside the euro area was about 25% at the end of 1999. The largest unhedged exposures are in Swedish kronor and British pounds.

#### Interest rate risk

In accordance with the Group's risk management policy, the objective is to hedge against significant interest rate risks. In order to manage interest rate risks, the Group's borrowing and investments are spread out between fixed and variable interest rate instruments. In addition, interest rate swaps and forward rate agreements are used actively, as are other derivatives. A maximum of 50% of the Group's long-term liabilities can be fixed-rate borrowings. At the end of 1999, 28% of the Group's entire loan portfolio consisted of fixed-interest borrowings. Pension loans are considered to be variable-interest loans. Treasury Management also monitors the duration of the loan portfolio as well as its sensitivity to changes in the interest rate curve. The average duration of the entire loan portfolio at the end of 1999 was about 16 months, with the duration for pension loans set at one year. In 2000 the duration of the loan portfolio can very in a range of 6 - 24 months. In 1999 a change of one percentage point in the interest rate curve was allowed to cause a maximum change of EUR 13.5 million in the market value of the asset/liability portfolio. During 1999 a change of one percentage point would have led on aver-

age to a change of about EUR 8 million in the asset/liability porfolio. For 2000, the new limit is EUR 15 million. By a decision of the Management Board, the limits can be changed in accordance with the market situation. As a consequence of this policy, the Group's average interest rate level has in general been higher than the market level of short-term interest rates when low rates prevail and, on the other hand, lower than the market level when high rates prevail.

### Counterparty risk

Counterparty risk is due to the fact that a contractual party to a financing transaction is not necessarily able to fulfil its obligations under the agreement. Counterparty risks in treasury operations are mainly connected with investing funds and with the counterparty risks of derivative contracts. The Group accepts as its counterparty only financial institutions that have a good credit rating. At present there are more than 20 approved counterparties. A counterparty that has received a credit rating under the A level or that is unrated must have a separate approval. At present this condition applies only to a few counterparties. Before being accepted as a counterparty, the financial institution must go through a special approval process. In addition, Treasury Management approves the new banking relationships of subsidiaries. Counterparty risk is monitored on a monthly basis by defining from the market values of receivables the maximum risk associated with each counterparty. For each financial institution, there is an approved limit. Of these limits, the maximum amount in use at the turn of the year was 33 %. Short-term investments are made in liquid instruments that have a low risk. Credit risks in treasury operations did not result in credit losses during the financial year.

## Funding risk

The Group diversifies its funding risk by obtaining financing from different sources in different markets. The Group has bank loans, pension loans, insurance company loans, a Medium Term Note Programme as well as shortterm domestic and foreign commercial paper programmes. The objective is to balance the maturity schedule of the bond and loan portfolio and to maintain a sufficiently long maturity for long-term loans. The Group's solvency and funding arrangements are safeguarded by maintaining good liquidity and by means of revolving credit facilities. The Group has a commercial paper programme, providing for the raising of a maximum of EUR 150 million as well as a Euro Commercial Paper (ECP) programme, within which a maximum of USD 200 million can be raised. The ECP programme was used to a very minor extent in 1999. The Group's average liquidity in 1999 was EUR 91 million. At the end of 1999 the liquidity was EUR 88 million as well as an unutilized revolving credit facility of about EUR 260 million, or a total of EUR 348 million. The management of liquidity is being developed continually through more effective use of the Group's cash pool arrangements. The introduction of the euro from the beginning of 1999 and the euro cash pool that is to be developed as a consequence of it will facilitate the management of liquid funds considerably. As plans now stand, a euro cash pool will be started up stage by stage during 2000.

#### **Documentation risk**

The Group's documentation risk of financing agreement is managed by concentrating the approval of financing agreements within Group Treasury as well as by using standardized agreement models.

Financial instruments	31.12.1999		31.12.1998	
	Nominal value	Fair value	Nominal value	Fair value
Currency instruments				
Forward contracts	318.9	1.9	378.9	-4.2
Of which for hedging of future currency f	lows <b>47.7</b>	3.2	125.2	-2.5
Currency options				
Bought	5.8	0.1	38.7	0.9
Sold	11.6	-0.5	59.3	-0.9
Currency swaps	183.2	-9.9	198.9	-5.6
Interest rate instruments				
Interest rate swaps	173.9	-3.6	120.5	-6.3
Forward rate agreements	290.0	_	321.2	0.1
Of which open	_	_	15.8	0.1
Bond futures	2.0	_	_	_
Of which open	_	_	_	_

Nominal values of the financial instruments do not necessarily correspond with the actual cash flows between the counterparties and do not therefore give a fair view of the risk position of the Group.

Fair values are based on market valuation on the date of reporting for the instruments which are publicly traded. Other instruments have been valued based on net present values of future cash flows. A valuation model has been used to estimate the fair values of options.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS 27. SHARES AND HOLDINGS OF GROUP COMPANIES

			%
Associated companies 1)			
A/S Ammonia	Fredericia	Denmark	33.3
Alufluor AB	Helsingborg	Sweden	50.0
Aluminium Sulphate Co. of Egypt, S.A.E.	Cairo	Egypt	26.1
Aquanorm V.O.F.	Gorinchem	The Netherlands	50.0
Corob India PVT.LTD	Mumbai	India	25.5
DA Kemikaalide AS	Tallinn	Estonia	40.0
Farmit Website Oy	Helsinki	Finland	33.3
Indkoebsselskabet for Kali I/S	Fredericia	Denmark	50.0
Kemax B.V.	Rozenburg	The Netherlands	50.0
Kemira Arab Potash Company	Amman	Jordan	48.0
Kemira Compound Fertiliser (Zhanjiang) Co. Ltd.	Zhanjiang	China	49.0
Kemira Emirates Fertilizer Company (Kefco)	Dubai	United Arab Emirates	39.8
Kemira Kuok Fertilizer Sdn. Bhd.	Kuala Lumpur	Malaysia	30.0
Kemira Thai Co. Ltd	Bangkok	Thailand	49.5
Kemira Trading Oy	Helsinki	Finland	100.0
Kemira-Ube Ltd	Tokyo	Japan	50.0
Kemwater Phil., Corp.	Manila	Philippines	40.0
Kemwater (Yixing) Co., Ltd	Yixing City	China	49.0
KK Animal Nutrition (Pty) Ltd.	Durban	South Africa	50.0
Movere Oy	Lahti	Finland	40.0
Oy Polargas Ab	Oulu	Finland	30.0
PK Düngerhandelsgesellschaft m.b.H.	Hannover	Germany	50.0
Seco S.A.	Ribécourt	France	49.9
Superstar Fertilizers Co. Ltd	Bangkok	Thailand	40.0
Spruce Vakuutus Oy	Helsinki	Finland	100.0
Swedish Water Corporation AB	Stockholm	Sweden	25.0
UAB Kemira Lifosa	Kedainiai	Lithuania	33.1
Union Kemira Co.	Abu Dhabi	United Arab Emirates	49.0
Varteko Valduse AS	Pärnu	Estonia	41.8

<sup>&</sup>lt;sup>1)</sup> Including such wholly owned companies that have been consolidated according to the equity method. Real estate and housing companies are included in other shares.

## Other shares and holdings

Ekokem Oy Ab	Finland	3.0
Peder P. Hedegaard A/S	Denmark	5.0
Vierumäen Kuntokylä Oy	Finland	8.0
Forcit Oy	Finland	15.4
Suomen Rehu Oy	Finland	19.9

A list of consolidated subsidiaries is on pages 70-71.

## 28. SEGMENT DATA

### Primary segment - business segment

The Group is organized into the following main business areas: Kemira Chemicals, Tikkurila, Kemira Agro and Kemira Pigments.

Intra-Group transfer prices are based primarily on market prices. In some cases, for example, where marketing companies are involved, cost-based prices are used, thereby including the margin (so-called cost plus method).

The assets and liabilities of businesses comprise assets and liabilities which can be allocated, directly or justifiably, to the businesses in question. The assets of the business segments include tangible and intangible assets, interest in associated companies, inventories and non-interest-bearing receivables. Short-term non-interest-bearing liabilities are included in the liabilities of the business segments.

Holding

## Sagment data (EUR million)

1999	Kemira Chemicals	Tikkurila	Kemira Agro	Kemira Pigments	Other	Group
Income statement External net sales Intra-Group sales	629.4 67.6	357.3 0.2	1,000.4 14.3	477.7 10.8	61.4 -92.9	2,526.2
Net sales, total	697.0	357.5	1,014.7	488.5	-31.5	2,526.2
Share of associates' profits	2.9	_	-0.5	_	0.4	2.8
Operating income	83.2	23.1	-38.8	34.9	8.6	111.0
Other information Assets of businesses of which holdings in associated con Unallocated assets Consolidated assets, total	777.2 npanies 29.3	297.5 -	792.5 16.5	538.4 0.6	58.5 4.3	2,464.1 50.7 138.8 2,602.9
Liabilities of businesses Unallocated liabilities Consolidated liabilities, total	112.1	59.1	231.4	93.0	6.0	501.6 1,118.4 1,620.0
Capital expenditure Depreciation	48.9 56.0	22.6 18.1	47.4 64.2	46.2 46.2	3.0 3.6	168.1 188.1
Cash flow Operations Capital expenditure Financing	75.0 -48.5 -14.5	27.5 -20.5 -5.8	36.5 -46.3 3.7	55.1 -46.2 -1.4	-13.2 11.9 -20.4	180.9 -149.6 -38.4
1998						
Income statement External net sales Intra-Group sales	566.6 63.1	360.5	1,011.1 19.2	411.8	62.7 -93.4	2,412.7
Net sales, total	629.7	360.5	1,030.3	422.9	-30.7	2,412.7
Share of associates' profits	4.0	_	-0.1	_	1.1	5.0
Operating income	75.1	32.6	18.7	22.3	-0.6	148.1
Other information Assets of businesses of which holdings in associated con Unallocated assets Consolidated assets, total	707.2 npanies 26.7	285.2	771.8 9.1	485.6 0.6	63.3 5.2	2,313.1 41.6 140.0 2,453.1
Liabilities of businesses Unallocated liabilities Consolidated liabilities, total	149.2	82.0	195.9	87.5	-106.2	408.4 1,095.5 1,503.9
Capital expenditure Depreciation	126.3 48.2	22.8 16.1	62.1 57.2	40.4 44.1	3.9 5.1	255.5 170.7
Cash flow Operations Capital expenditure Financing	79.4 -125.3 57.0	9.0 -15.4 7.6	19.4 -61.0 15.0	37.4 -37.9 -8.3	-22.5 1.8 1.8	122.7 -237.8 73.1

#### Secondary segment - Geographical segment

	1999	1998
Net sales		
Finland	453.5	497.2
Other EU countries	1,324.5	1,275.3
Rest of Europe	<b>211.7</b>	206.1
North and South America	328.9	267.7
Asia	167.8	124.5
Other countries	39.8	41.9
Total	2,526.2	2,412.7
Assets (tangible and intangible fixed assets)		
Finland	535.5	531.1
Other EU countries	603.8	608.8
Rest of Europe	34.5	27.9
North and South America	190.0	170.9
Asia	42.4	37.6
Other countries	1.7	_
Total	1,407.9	1,376.3
Capital expenditure		
Finland	77.6	82.7
Other EU countries	58.9	71.0
Rest of Europe	9.8	8.6
North and South America	20.4	52.3
Asia	1.3	40.8
Other countries	0.1	0.1
Total	168.1	255.5

#### 29. CHANGES IN GROUP STRUCTURE

## Acquisitions of Group companies, and new subsidiaries that have been founded

- A. Jalander Eesti Oü, a wholly-owned subsidiary of A. Jalander Oy that was established in Estonia, began operations.
- Kemira Agro Oy acquired a 50% stake in the Italian company Biolchim S.p.A., which will operate as a joint venture.
- Tikkurila Paints Oy established a wholly-owned subsidiary in Moscow. The company's name is OOO Kraski Tikkurila.
- Kemira Agro Oy established an associated company in Dubai, United Arab Emirates, together with Union Kemira Co. and Emirates Food Company (EFC). The holdings are 30%, 20% and 50%, respectively. The company's name is Kemira Emirates Fertilizer Company (Kefco).
- Kemira Agro Oy acquired a 33.3% holding in Farmit Website Oy, a company in Helsinki.
- Kemira Agro Oy established an associated company in Jordan under the name Kemira Arab Potash Company. Its stake in the company is 48%. The new company is owned by Kemira Danmark A/S.
- Kemira Chemicals Oy established an associated company in China under the name Kemwater (Yixing) Co., Ltd. The stake in the company is 49%.
- Kemira Chemicals Oy established in Hungary a wholly-owned marketing company named Kemira Chemicals Hungaria KFT.
- On 21 December 1999 Kemira Chemicals Oy established in Canada a company named Kemira Chemicals Canada NRO, Inc.
- In January 2000 Kemira Chemicals Oy and the City of Helsinki established a company named Kemwater Services Oy, which will be engaged in the treatment of waste water. Kemira Chemicals Oy has a 51% holding in the company and the City of Helsinki has 49%.
- Kemira Agro increased its ownership in Chinese Kemira Compound Fertiliser (Zhanjiang) Co. Ltd. from 35% to 49%.

#### Changes in holdings in Group companies within the Group

- Kemira N.I. Ltd was merged with Kemira Agro U.K. Ltd, and Kemira Agro U.K. Ltd became the parent company of Kemira Ireland Ltd.
- Kemira Chemicals Oy sold the company named Kemira Kemwater GmbH to Tikkurila Coatings Oy. The company's name was changed to Tikkurila Coatings GmbH.
- Corob S.p.A. was merged with Taotek S.p.A. on 31 December 1999. In connection with the merger, Taotek S.p.A.'s name was changed to Corob S.p.A.
- In Denmark Kemira Oyj established a company named Kemira Danmark Holding A/S, to which Kemira Danmark A/S was transferred from the ownership of Kemira Agro Oy and Kemira Miljø A/S was transferred from the ownership of Kemira Kemi AB.

#### Name changes

- Taotek North America Inc changed its name to Corob North America Inc.
- Taotek Asia Ltd was renamed Corob Ltd.
- AS Tikkurila International Coatings was renamed AS Tikkurila Coatings.
- Kemira Color B.V.'s name was changed as from 1 January 2000 to Tikkurila Coatings B.V.
- Kemira Coatings Ltd's name was changed as from 1 January 2000 to Tikkurila Coatings Ltd.
- Kemira Coatings (Ireland) Ltd's name was changed as from 1 January 2000 to Tikkurila Coatings (Ireland) Ltd.

## KEMIRA OYJ FINANCIAL STATEMENTS

INCOME STATEMENT (EUR million)			
INCOME STATEMENT (EUR IIIIIIOII)		1.1.	- 31.12.
	Note	1999	1998
Net sales	1	27.2	31.7
Other income from operations Cost of sales	$\frac{2}{3,4}$	9.8 -32.5	0.5 -37.1
Depreciation	5	-1.0	-1,8
Operating income		3.5	-6.7
Financing income and expenses	6	16.5	8.2
Income before extraordinary items,	0	20.0	1.5
appropriations and taxes			
Extraordinary items	7	81.6	106.1
Income before appropriations and tax		101.6	107.6
•• •		0.0	0.0
Appropriations Direct taxes	5 9	$\begin{array}{c} 0.0 \\ -28.4 \end{array}$	0.8 -30.4
Net income		73.2	78.0
CASH FLOW STATEMENT (EUR million)		1999	1998
Funds from operations Operating income		3.5	-6.7
Depreciation		1.0	1.7
Interest income		31.0	26.0
Interest expense		-22.5	-17.4
Dividend received Other financing items		1.3 $17.4$	3.5 2.9
Taxes		-20.4	-23.7
Total funds from operations		11.3	-13.7
Change in net working capital			
Short-term receivables		-2.7	30.0
Non-interest-bearing short-term liabilitie	s	7.5	-41.1
Change in net working capital, total		4.8 16.1	-11.1 -24.8
Cash flow from operations		10.1	-24.6
Capital expenditure Acquisitions of Group companies		-66.3	-9.7
Acquisitions of associated companies		-00.5	-9.7 -1.4
Purchase of other fixed assets		-0.8	-0.6
Disposal of associated companies Sales of other fixed assets		0.2	0.8 0.3
Total capital expenditure		-66.9	-10.6
Cash flow before financing		-50.8	-35.4
Financing			
Change in long-term loans (increase +, de Change in long-term loan receivables	ecrease -)	120.8	94.5
(increase -, decrease +) Short-term financing, net (increase +, decre	ace )	-47.6 -28.3	-90.4 124.8
Group contribution	asc -)	-28.5 109.1	62.4
Dividend paid		-36.8	-36.8
Other		-5.9	-0.1
Financing, total		111.3	154.4
Increase / decrease in liquid funds		60.5	119.0
Liquid funds at end of year Liquid funds at beginning of year		337.0 276.5	276.5 157.5
Increase / decrease in liquid funds		60.5	119.0

BALANCE SHEET (EUR million)			21.12
	Note	1999	<b>31.12.</b> 1998
	Note	1777	1990
ASSETS			
Non-current assets			
Intangible assets	10	0.4	0.3
Tangible assets Investments	11 12	21.4	21.9
Shares in Group companies	12	434.7	380.0
Holdings in associates		5.0	5.0
Other shares and holdings		3.1	3.1
Own shares		5.8	- (20 =
Total investments		477.3	429.7
Other investments		925.9	817.8
Total non-current assets		947.7	840.0
Current assets			
Receivables	13	44/4	=0.6
Interest-bearing receivables Interest-free receivables		114.1 123.4	70.6 136.7
Total receivables			207.3
Securities	14	237.5 334.3	207.3
Cash and bank	1.4	2.7	4.2
Total current assets		574.5	483.8
Total assets		1,522.2	1,323.8
LIABILITIES AND SHAREHOLDERS' EQUI	TY		
Shareholders' equity	15		
Share capital		217.0	216.6
Share premium account			210.0
Reserve for own shares		252.5	
		5.8	252.9
Retained earnings		5.8 184.9	252.9 - 149.5
Net profit for the financial year		5.8 184.9 73.2	252.9 - 149.5 78.0
Retained earnings Net profit for the financial year Total shareholders' equity		5.8 184.9 73.2 733.4	252.9 - 149.5 78.0 697.0
Retained earnings Net profit for the financial year	16	5.8 184.9 73.2	252.9 - 149.5 78.0 697.0
Retained earnings Net profit for the financial year Total shareholders' equity	16	5.8 184.9 73.2 733.4	252.9 
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities	17	5.8 184.9 73.2 733.4	252.9 - 149.5 78.0 697.0
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities		5.8 184.9 73.2 733.4 0.5	252.9 - 149.5 78.0 697.0 0.5 385.1
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities	17	5.8 184.9 73.2 733.4 0.5	252.9 - 149.5 78.0 697.0 0.5 385.1
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities	17	5.8 184.9 73.2 733.4 0.5	252.9 - 149.5 78.0 697.0 0.5 385.1
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities Total long-term liabilities	17 18	5.8 184.9 73.2 733.4 0.5	252.9 - 149.5 78.0 697.0 0.5 385.1 1.5 386.6
Retained earnings Net profit for the financial year  Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities  Total long-term liabilities  Current liabilities	17 18	5.8 184.9 73.2 733.4 0.5 525.2 - 525.2 217.5 45.6	252.9 -149.5 78.0 697.0 0.5 385.1 1.5 386.6
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities Total long-term liabilities  Current liabilities Interest-bearing short-term liabilities	17 18	5.8 184.9 73.2 733.4 0.5 525.2 525.2 217.5	252.9 -149.5 78.0 697.0 0.5 385.1 1.5 386.6
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities Total long-term liabilities  Current liabilities Interest-bearing short-term liabilities Interest-free short-term liabilities Total current liabilities	17 18	5.8 184.9 73.2 733.4 0.5 525.2 525.2 217.5 45.6 263.1	252.9 149.5 78.0 697.0 0.5 385.1 1.5 386.6 202.8 36.9 239.7
Retained earnings Net profit for the financial year Total shareholders' equity  Appropriations  Long-term liabilities Interest-bearing long-term liabilities Interest-free long-term liabilities Total long-term liabilities  Current liabilities Interest-bearing short-term liabilities Interest-free short-term liabilities	17 18	5.8 184.9 73.2 733.4 0.5 525.2 - 525.2 217.5 45.6	210.0 252.9 149.5 78.0 697.0 0.5 385.1 1.5 386.6 202.8 36.9 239.7 626.3 1,323.8

1. NET SALES	1999	1998
Net sales	27.2	31.7
Net sales consist of sale of electricity to Finnish companies and other external customers in I		
2. OTHER INCOME FROM OPERATIONS		
Gains on the sale of fixed assets	9.3	0.1
Other income Total	9.8	0.4
3. COST OF SALES	7**	
Materials and services		
Materials and supplies Purchases during the financial year	20.8	25.6
External services	_	0.2
Total materials and services	20.8 6.4	25.8 5.9
Personnel expenses Rents	2.3	2.5
Losses on the sales of fixed assets	0.0 3.0	0.0 2.9
Other expenses Total	32.5	37.1
4. PERSONNEL EXPENSES AND NUMBER OF		37.2
Emoluments of the Supervisory Board	0.1	0.0
Emoluments of boards of directors and managing directors 1)	0.9	0.6
Other wages and salaries	4.2	4.0
Pension expenses Other personnel expenses	0.7 0.5	0.6 0.5
Total	6.4	5.9
The managing director and deputy managing dentitled to retire at the age of 60. This possibilit supplementary pension foundation that has been 1 January 1991. The supplementary pension for the personnel whose years of service and other granting of a pension have been fulfilled.	y is based on the ber en closed to new me indation's benefits co conditions concern	nefits of the nbers since oncern all ing the
Management's pension commitments The managing director and deputy managing director and the transparent of the personnel whose years of service and other granting of a pension have been fulfilled.  The pension commitments to the management from those to the other permanent staff.	y is based on the ber en closed to new me indation's benefits co conditions concern	nefits of the nbers since oncern all ing the
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		1999		1998
Other financing income Other financing income from Group co	mpanies			0.2
Other financing income from others		0.0		0.1
Other financing income total Exchange differences		0.2		0.3
Exchange differences from Group comp Exchange differences from others	panies	75.2 -69.3		_
Total exchange differences		5.9		_
Total financing income		48.8		42.7
Financing evnenses				
Financing expenses Interest expenses				
Interest expenses to Group companies Interest expenses to others		-2.1 -29.7		0.5 -23.8
Total interest expenses		-31.8		-23.3
Other financing expenses		-0.5		-0.8
Exchange differences				2/-
Exchange differences from Group comp Exchange differences from others	panies	_		-24.7 $14.3$
Total exchange differences		_		-10.4
Total financing expenses		-32.3		-34.5
Total financing income and expenses		16.5		8.2
Exchange gains and losses				2 /
Realized Unrealized		17.7 –11.8		3.4 -13.8
Total		5.9		-10.4
7. EXTRAORDINARY ITEMS				
Extraordinary income Group contribution received		96.1		112.0
Total		96.1		112.0
Total		70.1		112.0
Extraordinary expenses		2.9		2.5
Group contribution granted Write-downs on shares		11.6		3.4
Total		14.5		5.9
Total extraordinary income and expenses	3	81.6		106.1
8. CHANGE IN APPROPRIATIONS				
Decrease in depreciation difference		0.0		0.8
Total		0.0		0.8
9. DIRECT TAXES				
		22.0		20.
Direct taxes on extraordinary items Direct taxes, current year		22.8 5.6		29.7 0.6
Direct taxes, previous years		0.0		0.1
Other		0.0		0.0
Total		28.4		30.4
10. INTANGIBLE ASSETS			4000	1000
Ir		Other long- term expen-	1999 total	1998 total
	rigitts	ditures	total	totai
A constitution occurred to the state of	0.7	1.0	4.0	2.0
Acquisition cost at beginning of year Increases	0.6 0.1	$\frac{1.2}{0.1}$	1.8 0.2	2.0 0.0
Decreases	0.0	-0.8	-0.8	-0.2
Acquisition cost at end of year	0.7	0.5	1.2	1.8
Accumulated depreciation at beginning of year	-0.4	-1.1	-1.5	-1.4
Accumulated depreciation relating to	-0.4	-1.1	-1.9	-1.4
		0.8	0.8	0.0
decreases and transfers	0.0			
Depreciation during the financial year	0.0	-0.1	-0.1	-0.1
				-0.1 -1.5 0.3

## NOTES TO KEMIRA OYJ FINANCIAL STATEMENTS BALANCI SHEET (EUR million)

11. TANGIBLE ASSETS	Land and water areas 1)	Buildings and constructions <sup>2)</sup>	Machinery and equipment	Other tangible assets	Advances paid and fixed assets under construction	1999 total	1998 total
Acquisition cost at beginning of year	2.7	28.2	9.5	0.5	0.1	41.0	40.6
Increases	0.0	0.0	0.5	0.0	-0.1	0.4	0.6
Decreases	0.0	0.0	-1.2	0.0	0.0	-1.2	-0.2
Acquisition cost at end of year	2.7	28.2	8.8	0.5	0.0	40.2	41.0
Accumulated depreciation at beginning of ye	ear 0.0	-11.2	-7.5	-0.4	0.0	-19.1	-17.6
Accumulated depreciation relating to							
decreases and transfers	0.0	0.0	1.2	0.0	0.0	1.2	0.1
Depreciation during the financial year	0.0	-0.3	-0.6	0.0	0.0	-0.9	-1.6
Accumulated depreciation at end of year	0.0	-11.5	-6.9	-0.4	0.0	-18.8	-19.1
Net book value at end of year	2.7	16.7	1.9	0.1	0.0	21.4	21.9

 $<sup>^{1)}</sup>$ The acquisition cost and the book value of land and water areas include revaluations of EUR 0.6 million in 1999 and in 1998.

 $<sup>^{2)}</sup>$  The acquisition cost of buildings and constructions include revaluations of EUR 5.0 million in 1999 and in 1998.

12. INVESTMENTS	Holdings in associates	Group company and other shares	Investments in Group companies	Own shares	1999 total	1998 total
Acquisition cost at beginning of year	5.0	383.1	429.7	_	817.8	720.5
Increases	0.0	66.4	0.0	5.8	72.2	11.1
Decreases	0.0	-11.7	0.0	-	-11.7	-4.2
Receivables from Group companies	0.0	0.0	47.6	-	47.6	90.4
Net book value at end of year	5.0	437.8	477.3	5.8	925.9	817.8

Shares and holdings are specified in Note 21.

Taxable values of real estate and	1999	1998
securities included in non-current assets		
Land and water areas	0.5	0.5
Buildings and constructions	14.3	14.3
Shares in subsidiaries	481.5	421.5
Other shares and holdings	5.4	4.6

To the extent that taxation values have not been confirmed for shares and holdings, book values have been used.

13. RECEIVABLES		
Long-term receivables Interest-free long-term receivables Receivable from pension liability at 1 Jan.	1.5	1.4
Transfer to other short-term		1.4
interest-free receivables Increase / Decrease	-1.5 -	0.1
Receivables from pension liability at 31 Dec.		1.5
Total interest-free long-tem receivables		1.5
Total long-term receivables		1.5
Total long-term receivables		1.5
Current receivables		
Interest-bearing short-term receivables		
Loan receivables from Group companies	114.1	70.6
Total interest-bearing short-term receivables	114.1	70.6
Interest-free short-term receivables		
Accounts receivable	2.2	2 -
Accounts receivable from Group companies Accounts receivable from others	3.2 1.0	2.7 1.8
Total accounts receivable	4.2	4.5
Advances paid	0.1	0.1
Prepaid expenses and accrued income	0.1	0.1
Prepaid expenses and accrued		
income from Group companies	111.0	124.7
Prepaid expenses and accrued	6.7	5.0
income from others		5.9
Total prepaid expenses and accrued income Other interest-free short-term receivables	117.7	130.6
Receivables from pension liability at 1 Jan.	_	_
Transfer from long-term receivables	1.5	-
Decrease	-0.2	
Receivable from pension liability at 31 Dec. Other receivables	1.3	-
Other receivables	0.1	
Total other interest-free short-term receivables	1.4	
Total interest-free current receivables	123.4	135.2
Total receivables	237.5	207.3
Loans to the management	-	-

	4000	1000
Prepaid expenses and accrued income	1999	1998
From interests	9.9	11.5
From exchange differences	5.9	2.8
From Group contribution	96.1	112.0
Other	5.8	4.3
Total	117.7	130.6
14. SECURITIES		
Securities in Group companies	308.2	249.0
Securities in other companies	26.1	23.3
Total	334.3	272.3
15. SHAREHOLDERS' EQUITY		
Share capital at 1 Jan.	216.6	216.6
Change	0.4	_
Share capital at 31 Dec.	217.0	216.6
Share premium account at 1 Jan.	252.9	252.9
Change	-0.4	->>
Share premium account at 31 Dec.	252.5	252.9
Fund for own shares at 1 jan.	_	_
Purchase of own shares	5.8	_
Funf for own shares at 31 Dec.	5.8	-
Retained earnings at 1 Jan.	227.5	186.3
Net profit for the year	73.2	78.0
Dividends paid	-36.8	-36.8
Purchase of own shares	-5.8	-
Donations	0.0	0.0
Retained earnings and net	250.1	227.5
profit for the year at 31 Dec.	258.1	227.5
Total shareholders' equity at 31 Dec.	733.4	697.0
16. APPROPRIATIONS		
Appropriations	C-11	
Appropriations in the balance sheets are as Buildings and constructions	follows:	-0.2
Machinery and equipment	0.4	0.7
Other tangible assets	0.1	0.1
Intangible rights	0.0	0.0
Other long-term expenditures	0.0	-0.1
Total	0.5	0.5
Change in appropriations		
Appropriations at 1 Jan.	0.5	1.3
Change in untaxed reserves Appropriations at 31 Dec.	0.0	-0.8

Deferred tax liabilities on accumulated depreciations was EUR 0.1 million at 31 Dec.1999 and EUR 0.1 million at 31 Dec.1998.

NOTES TO KEMIRA OYJ FINANCIAL STATE	MENTS			
BALANCI SHEET (EUR million)	1999	1998		
17. LONG-TERM INTEREST-BEARING LIABILITIES				
Debentures and other bond loans	61.7	61.7		
Loans from financial institutions Loans from pension institutions	380.7 56.3	258.0 65.3		
Other long-term liabilities	26.5	0.1		
Total	525.2	385.1		
Long-term interest-bearing liabilities mate	uring in 45.5	0.4		
2001 (2000) 2002 (2001)	8.7	17.5		
2003 (2002) 2004 (2003)	174.3 142.2	7.1 134.8		
2005 (2004) or later	154.5	225.3		
Total	525.2	385.1		
Liabilities maturing in 5 years or longer	<b>5</b> 6.2	65.2		
Loans from pension institutions Other long-term liabilities	56.3 98.2	65.3 160.0		
Total	154.5	225.3		
Debentures and other bond loans				
Loan Currer FI 0003008581 1998-2003 EUR	45.2	45.2		
FI 0003008599 1998-2006 EUR	16.5	16.5		
Total	61.7	61.7		
The Group has no convertible bonds.				
18. LONG-TERM INTEREST-FREE LIABILITI	ŒS			
Pension liabilities	0.1	0.1		
Uncovered liabilities of pension funds Other pension liabilities	$\begin{array}{c} \textbf{0.1} \\ \textbf{1.4} \end{array}$	$0.1 \\ 1.4$		
Transfer to other interest-free liabilities Total	-1.5	1.5		
19. CURRENT LIABILITIES	<del>_</del>	1.5		
Interest-bearing short-term liabilities Loans from financial institutions	87.6	101.0		
Current portion of other long-term loans to others	11.5	30.8		
Other interest-bearing short-term liabilities		-		
to Group companies to others	79.2 39.2	57.6 13.4		
Total interest-bearing short-term liabilities	217.5	202.8		
Repayments of other long-term loans include EUR 0.1 million of bonds with warrants targeted at management. Details of the issue are given on page 14.				
Interest-free short-term liabilities Accounts payable				
to Group companies	0.0	0.0		
to others Total accounts payable	3.0	2.7		
Accrued expenses and prepaid income	3.9	6.7		
to Group companies to others	37.4	27.2		
Total accrued expenses and prepaid income <b>Pension liabilities</b>	41.3	33.9		
Transfer from interest-free long-term liablities Change in pension liabilities	1.5 -0.3	-		
Total pension liabilities	1.2	_		
Other interest-free liabilities to others	0.1	0.3		
Total interest-free short-term liabilities Total current liabilities	45.6 263.1	36.9 239.7		
	J., J. I	437./		
Accrued expenses and prepaid income From salaries	0.9	0.9		
From interests and exchange differences From taxes	26.9 7.6	22.4		
From Group contribution	0.2	6.6 0.2		
Other Total	5.7 41.3	3.8		
10tml	31.7	33.9		

	1999	1998			
20. COLLATERAL AND CONTINGENT LIABILITIES					
Loans secured by mortgages in the bal- for which mortgages given as collatera					
Loans from pension institutions	4.3	5.0			
Mortgages given	5.0	5.0			
Contingent liabilities					
Assets pledged					
On behalf of own commitments	0.2	3.5			
On behalf of Group companies	10.9	10.9			
Guarantees					
On behalf of Group companies					
For loans	70.0	121.2			
For leasing obligations	54.1	50.5			
For other obligations	7.7	1.1			
On behalf of associates	20.2	22.8			
On behalf of others	1.9	2.2			
Total	153.9	197.8			
Letter of Comfort obligations 1)					
On behalf of Group companies					
For credits	0.2	2.0			
For leasing agreements	3.7	4.5			
Total		6.5			
TOTAL	3.9	0.5			

<sup>1)</sup> Letter of Comfort obligations do not constitute a legal guarantee.

The nominal values and market values of financing instruments are included in the Notes to the consolidated financial statements.

## 21. SHARES AND HOLDINGS OF KEMIRA OYJ

			Holding
Shares in subsidiaries			%
Kemira Agro Oy	Helsinki	Finland	100
Kemira Chemicals Oy	Helsinki	Finland	100
Kemira Pigments Holding B.V.	Rotterdam	The Netherlands	17.8 1)
Kemira Metalkat Oy	Helsinki	Finland	100
Kemira Pigments Oy	Helsinki	Finland	100
Kemira Safety Oy	Helsinki	Finland	100
Tikkurila Oy	Helsinki	Finland	100
Spruce Vakuutus Oy	Helsinki	Finland	100
Kemira Danmark Holding A/S	Fredericia	Denmark	100
Other shares and holdings			
Ekokem Oy Ab		Finland	1.4
Forcit Oy		Finland	15.4
Innopoli Oy		Finland	0.7
Liikkeenjohdon koulutuskeskus		Finland	2.0
Luoston Huolto Oy		Finland	1.3
Tahkoluodon Polttoöljy Oy		Finland	6.8
Teollisuuden Voima Oy		Finland	1.9
Shares in housing and real estate	companies		
Shares in telephone companies	•		
• •			

 $<sup>^{\</sup>rm 1)} The \ ownership \ of the Group is 100%.$ 

# PROPOSAL FOR THE DISTRIBUTION OF PROFITS

The net profit of Kemira Oy for the 1999 financial year was EUR 73,241,803 and the distributable equity at 31 December 1999 was EUR 258,105,760. The Group's non-restricted equity was EUR 485,650,000. The parent company's payment of a dividend is limited by the Group's distributable equity, EUR 351,388,000, which is obtained when the share of untaxed reserves that has been transferred to shareholders' equity

and own shares are subtracted from the non-restricted equity shown in the Consolidated Balance Sheet.

It is proposed to the Annual General Meeting that a dividend of EUR 0.23 per share, or EUR 29,624,000, be paid for the financial year. It is proposed that EUR 500,000 be reserved for use by the Board of Directors for purposes promoting the common good (among other things, for donations to the Kemira Oyj Foundation).

Helsinki, 14 February 2000

Sten-Olof Hansén

Niilo Pellonmaa

Timo Kaisanlahti

Eija Malmivirta

Tauno Pihlava

Anssi Soila

# **AUDITORS' REPORT**

To the shareholders of Kemira Oyj

We have audited the accounting records and the financial statements, as well as the administration by the Supervisory Board, the Board of Directors and the Managing Director of Kemira Oyj for the year ended 31 December 1999. The financial statements, which include the report of the Board of Directors, consolidated and parent company income statements, balance sheets and notes to the financial statements, have been prepared by the Board of Directors and the Managing Director. Based on our audit we express an opinion on these financial statements and the company's administration.

We have conducted our audit in accordance with Finnish Generally Accepted Auditing Standards. Those standards require that we plan and perform the audit in order to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence suppor-

ting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. The purpose of our audit of the administration has been to examine that the Supervisory Board, the Board of Directors and the Managing Director have complied with the rules of the Finnish Companies Act.

In our opinion, the financial statements have been prepared in accordance with the Finnish Accounting Act and other rules and regulations governing the preparation of financial statements in Finland. The financial statements give a true and fair view, as defined in the Accounting Act, of both the consolidated and parent company result of operations, as well as of the financial position. The financial statements can be adopted and the members of the Supervisory Board, the Board of Directors and the Managing Director of the parent company can be discharged from liability for the period audited by us. The proposal made by the Board of Directors on how to deal with the retained earnings is in compliance with the Finnish Companies Act.

Helsinki, 16 February 2000

KPMG WIDERI OY AB

Hannu Niilekselä Authorized Public Accountant

# STATEMENT OF THE SUPERVISORY BOARD

The Supervisory Board of Kemira Oyj has read the financial statements of the parent company and the Group for 1999 and studied the Auditors' report at its meeting today.

The Supervisory Board advises the 2000 Annual General Meeting that the company has been managed well and that it has no comments to make on the fi-

nancial statements of the parent company and the Group for 1999. The Supervisory Board proposes that the financial statements of the parent company and the Group be adopted and that the Board of Directors, the Managing Director and his deputies be discharged from liability. The Supervisory Board concurs with the proposal of the Board of Directors for the distribution of profit funds.

# Helsinki, 17 February 2000

Timo Kalli Kari Rajamäki

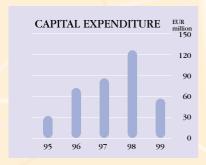
Hanna Markkula-Kivisilta Helena Rissanen

Risto Ranki Sirpa Hertell

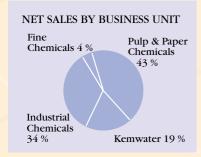
Pekka Kainulainen Mikko Långström

# **KEMIRA CHEMICALS**

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99



# MANAGEMENT

President: Yrjö Sipilä Pulp & Paper Chemicals: Juhani Lindholm Kemwater: Lennart Johansson Industrial Chemicals: Harri Kerminen



# Yrjö Sipilä

#### NET SALES AND PROFITS UP

It was a mixed year for Kemira Chemicals. There was wide variation among different products and different market areas: some products had good sales, whereas others faced conditions that were even tantamount to a price war. The chemical industry's difficulties in the wake of the Asian crisis continued in many fields. Within the pulp and paper industry, which is our most important customer group, business was depressed in the early months of the year, but by mid-year the demand for paper products and the price of pulp recovered. In the latter part of the year an upswing was already under way.

Kemira Chemicals continued its brisk growth in 1999. Net sales rose by 11% and were EUR 697 million (1998: EUR 630 million). Operating income was up 11% to EUR 83 million (EUR 75 million).

All the strategic business units increased their sales. Net sales of the Pulp and Paper Chemicals unit rose by 18% and were EUR 326 million. Kemwater's net sales were up 7% to EUR 145 million. Industrial Chemicals' net sales were EUR 256 million, an increase of 4%. Kemira Fine Chemicals Oy reported net sales of EUR 30 million, up 15%.

# A LARGELY GOOD MARKET TREND

Pulp & Paper Chemicals. The rise in the rate of capacity utilization at pulp and paper mills in the latter half of the year showed up quickly in the sales volumes of the Pulp & Paper Chemicals unit.

The market situation for hydrogen peroxide varied from place to place. In Europe and Asia there was marginal growth, but in the United States and Canada it was quite brisk. This was due mainly to the fact that the American pulp industry went over to ECF bleaching and it was also attributable to the rise in the level of mechanical pulp bleaching. The price level of hydrogen peroxide was relatively stable and slightly rising.

Kemwater. The market for water treatment chemicals developed in line with expectations. Growth continued in eastern and southern Europe. The situation in the developing countries varied according to the economic situation of each country. In Asia the situation showed slight signs of a rebound, but a recovery to pre-crisis levels still does not seem to have taken place. The Chinese market was the most buoyant. In certain areas of the established markets in Europe there were price pressures that affected the result of the Kemwater unit. Russia's exports have not yet recovered to the level preceding the devaluation, but signs of a revival can be seen there,

**Industrial Chemicals**. The price of phosphoric acid and demand for the product held steady. The appreciation against the euro of the United States dollar, which is used as the pricing currency for phosphoric acid, increased the phosphoric acid unit's margin, though it was burdened by an extensive shutdown for repairs. Value added products made from phosphoric acid - feed phosphates and detergent phosphates - faced continuing tough competition, resulting in a higher cost in dollars of phosphoric acid. It was difficult for Industrial Chemicals to factor this increase into prices.

The sodium percarbonate plant that was completed in Helsingborg, Sweden, in the previous year operated according to expectations and its ECOX product has been well received by customers. The sales outlook for

TIT ID III	4000	4000	400-	1006	4005
EUR million	1999	1998	1997	1996	1995
Net sales	697	630	582	520	472
Cost of sales	-558	-507	-462	-407	-371
Depreciation	<b>-5</b> 6	-48	-45	-42	-38
Operating income	83	75	75	71	63
Net financing expenses	-24	-19	-17	-20	-27
Income before extraordinary items	59	56	58	51	36
Capital invested (average)	596	524	453	415	405
Return on capital invested %	13	14	17	18	16
Capital expenditure	56	126	86	72	33
Personnel (average)	3,138	3,114	2,845	2,283	2,251



Alongside pulp and paper chemicals as well as paints, one of the Kemira Group's most important growth areas is water, spearheaded by the operations Kemwater. Pulp & Paper Chemicals and Kemira Agro have plenty of water-related synergy. Water management is one of the future cornerstones of Kemira's operations.

the product looks good over the next few years.

Calcium chloride had to compete with substitute products. Calcium chloride gets its raw material from the hydrochloric acid arising in the manufacture of calcium sulphate. In 1999 the marketing of potassium sulphate was difficult because China was almost entirely absent from the market, and potassium sulphate production had to be curtailed. For this reason, the hydrochloric acid needed to make calcium chloride was not generated, and Industrial Chemicals had to increase its purchases of hydrochloric acid from outside suppliers.

Kemira Fine Chemicals. The company's most important area of expertise is life sciences products, which the large companies in the field use as their raw materials. Demand is growing rapidly because life sciences companies are concentrating on research and development along with marketing.

# GREEN CHEMISTRY GAINS GROUND

Kemira Chemicals engaged in a wideranging dialogue on the company's future guidelines and we announced our new vision: A Vision of Green Chemistry. This vision defines the priorities for our future operations. Important growth areas in the years ahead are water management, recycling and environmental chemicals. These three areas are involved in all the sectors in which Kemira Chemicals operates. In 1999 a Water Research Centre was set up in Oulu. Another joint research project, which will concentrate on recycling, was set in motion in Helsingborg.

New information management systems have now been in use for the first year, and the feedback on them has been good. At some plants and companies, development work in this area is still going on. At present the information management programme mainly involves introducing a process

organization, for which about 500 Kemira Chemicals staff were trained during the year. Process organization training has been extended to reach from top management right down to the shop floor level. Concurrently, the process organization will be rounded out by deploying a core competence approach across our units.

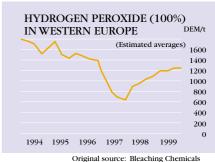
The changover to the year 2000 was made without problems.

Pulp & Paper Chemicals. The two hydrogen peroxide plants that were purchased in Korea and Canada a year ago were integrated into Kemira Chemicals' operations. Both companies have performed well in accordance with plans. Following these two acquisitions, Kemira is the world's fifth largest producer of hydrogen peroxide and it operates in all the main market areas in Europe, North America and

During the report year the accent in development work was on speciality chemicals for the paper industry. A decision was taken to build an extension to the AKD wax plant in Vaasa, Finland. AKD wax is used as a paper sizing. Another investment that is geared towards speciality chemicals is the building of a plant in Brazil. The company that is to be established will serve Brazil's paper industry, making available to it Kemira's expertise within paper sizing and other speciality chemicals.

Kemwater. At Kemwater several modernization and plant extension investments that have already been started up are in progress, including an expansion of the ferrichloride business in Germany, increasing the manufacture of aluminium sulphate in the Czech Republic and a plant investment in Brazil.

In 1999 acquisitions were largely on hold, with only one new company being purchased for the Kemwater family in addition to Solvay's ferrichloride business in Germany: an interest



in a Chinese company that manufactures polyaluminium chloride. By way of this investment we gained a foothold in the growing Chinese market for water treatment chemicals. The new company, Kemwater (Yixing) Co. Ltd will be developed in step with growth in the market.

Kemwater and the City of Helsinki established a joint service company in the water treatment field. Kemwater has a 51 % stake in the company.

Industrial Chemicals. The unit continued to concentrate on developing ECOX percarbonate grades and on ensuring its ability to produce this product.

# GROWTH HINGES ON RESEARCH AND DEVELOPMENT

Research and development are the key condition for the continuing growth of Kemira Chemicals. At Kemira Chemicals, research is organized under the business units, which direct research in line with market demands. The research priority is projects run by or for Pulp & Paper Chemicals and Kemwater. Each year Kemira Chemicals spends about 2.5% of its net sales on research and development. The most important research results have centred on speciality chemicals for the paper industry and the development of pulp bleaching. At Kemwater a number of new iron-based coagulant solutions have been developed for water treatment plants. The Krepro waste water sludge recycling system was also developed further.

# GOOD FUTURE PROSPECTS

The economic outlook for 2000 is by and large positive. The rise in the degree of capacity utilization in the paper industry, which got under way late in 1999, and the improvement in the demand for paper products are likely to continue on into the first part of 2000.

Kemwater's markets appear stable and we believe that many of the new joint ventures that have been established in recent years will get up to speed.

The market outlook for Industrial Chemicals' products is spottier. Slight price pressures are affecting the price of phosphoric acid, but at present these are offset by the high exchange rate of the dollar against the euro. The market prospects for potassium sul-



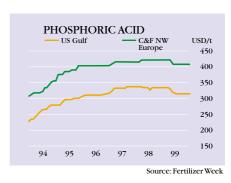
Kemira Chemicals wants to offer total solutions to its customers in the pulp and paper industry. A part of this integrated programme is hydrogen peroxide, which is produced at Kemira Chemicals' plants in Europe, North America and Asia.

phate are unstable and it is not likely that production cutbacks affecting this product can be avoided in 2000. The calcium chloride market appears stable. It is also believed that the market for feed phosphates will hold up, though detergent phosphates are facing price pressures.

Kemira Chemicals will continue to develop all its units, with an accent on the development of speciality chemicals for the paper industry as well as on Kemwater's new projects and boosting market share.

Kemira Chemicals has prepared a new strategic process that seeks to generate new business and growth. The process is based on the core competence approach and on making wide-ranging use of the company's expertise in all areas of development work. New growth will be sought in the three synergy areas that are connected with the unit's present businesses: water chemistry expertise, recycling and environmental chemicals.

Kemira Chemicals' earnings in 2000 are expected to remain good.



# TIKKURILA

# EARNINGS HIT BY THE FALL IN EASTERN EXPORTS

Tikkurila had net sales in 1999 of EUR 357 million (361 million in 1998). Operations outside Finland accounted for 75% of Tikkurila's net sales.

Operating income was EUR 23 million (33 million in 1998), or 6% of net sales. Operating income was mainly reduced by the significant fall in exports to the east and outlays on new markets.

# MARKET SITUATION

A strong market for Tikkurila Paints. The company manufactures paint products for consumers and professional painters. Its production plants are located in Finland, Estonia, Latvia, Russia, Poland and Italy. In addition, Tikkurila has sales companies in Sweden, Lithuania, Hungary and the UK.

Paint sales were very good in Finland. The weather favoured house painters during the outdoor painting season. Economic activity was also at a fairly good level, leading to a pickup in building construction and in the housing market. Market share in Sweden was increased as a result of structural changes in trade channels.

A number of new product releases, such as tinted interior lacquers, were well received. Benetton interior paints were brought out on the new product market and full-scale marketing of the products got started in the UK. In addition, marketing was launched in Sweden, Finland and Japan, and it is getting under way in Central Europe.

Despite the crisis in Russia, St Petersburg-based ZAO Finncolor succeeded in maintaining its dealer network intact. In part, this was attributable to the expansion of the company's own production. Russia's economic situation has begun to improve, and there are already clear signs of a revival in trade.

Tikkurila Baltcolor Sp. z o.o. in Szczecin, Poland, a company that is run jointly by Tikkurila and Baltchem, operated in accordance with plans. The Hungarian sales company Tikkurila Festék Kft. has continued its positive development. The customer network has been strengthened further and Tikkurila products have achieved a permanent foothold in Hungary.

The economic crisis in Russia and its repercussions in the Baltic countries cut into the earnings of Baltic Color, the joint venture between Tikkurila Paints and Alcro-Beckers. The company has nevertheless further strengthened its leading position in the Baltic Rim.

Uneven markets for Tikkurila Coatings. The company manufactures and markets paints and coatings for industry. Production plants are located in Finland, the UK, the Netherlands, and Poland. The unit has sales companies in Sweden, Ireland, Estonia, Russia and Hungary.

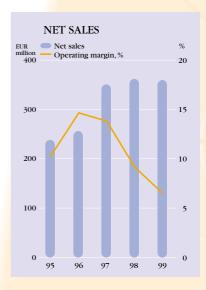
The plant in Finland increased its sales, with the largest growth coming in products for the woodworking industry. New, water-borne products were introduced in both the metal and woodworking industry. Sales of coil coatings declined in the first months of the year owing to the weak market situation for the end product – coated thin sheet – but they picked up considerably in the latter months of the year in both the domestic and export markets.

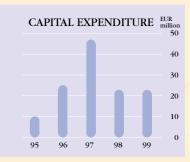
The shrinkage in the total market for the Finnish metal industry has also led to a reduced need for paints used by this industry. Exports, however, are growing, especially to Russia.

The overseas subsidiaries fared reasonably well. Dickursby Färg AB in Sweden was slightly behind last year's sales figures, primarily owing to the weak sales of coil coatings.

Tikkurila Coatings has a solid position in the Baltic furniture and joinery industry. Sales to the metal industry

1999	1998	1997	1996	1995
357	361	349	255	237
-316	-312	-288	-208	-202
-18	-16	-13	-10	-11
23	33	48	37	24
-4	-5	-4	-4	-4
19	28	44	33	20
234	211	181	170	172
10	16	27	22	15
23	23	47	25	10
2,301	2,214	1,902	1,520	1,585
	357 -316 -18 23 -4 19 234 10 23	357 361 -316 -312 -18 -16 23 33 -4 -5 19 28 234 211 10 16 23 23	357     361     349       -316     -312     -288       -18     -16     -13       23     33     48       -4     -5     -4       19     28     44       234     211     181       10     16     27       23     23     47	357     361     349     255       -316     -312     -288     -208       -18     -16     -13     -10       23     33     48     37       -4     -5     -4     -4       19     28     44     33       234     211     181     170       10     16     27     22       23     23     47     25







# MANAGEMENT

Tikkurila Oy President: Raimo Piironen Tikkurila Coatings Oy President: Tapio Käär Tikkurila CPS Oy President: Raimo Piironen Vice President: Vesa Aulanko Tikkurila Paints Oy President: Visa Pekkarinen Tikkurila Services Oy President: Tom Nurmi



Raimo Piironen

both directly and through dealers have grown considerably. Sales by the Estonian subsidiary AS Tikkurila Coatings have developed favourably and the unit has expanded its operations.

The new products which the plant in Poland manufactures according to Tikkurila's formulas now already outsell old products. The sales company in Budapest, Tikkurila Coatings Kft, strengthened its position on the Hungarian market.

Kemira Color B.V., the plant in the Netherlands, performed satisfactorily. The company in the UK, Kemira Coatings Ltd, had a poor year in 1999. The reasons for this are a strong pound against the other euro currencies as well as a contraction in the total market for paints used in the metal industry. The market in Ireland, however, has developed well.

Tikkurila CPS has great potential. Tikkurila CPS is the world's leading supplier of advanced tinting systems and its products are mainly delivered to the paint industry on all continents. The product range includes all the components of colour processing systems: colourants, equipment, software and tools for colour marketing.

CPS produces colourants in Australia, South Africa, the Netherlands, Singapore, Finland and the United States. Corob manufactures tinting machines in India, Italy, Finland, Uruguay and the United States. CPS and Corob furthermore have sales companies in Sweden, the UK and Germany as well as service units in China and Australia.

The colourant plant Tikkurila Inc. in the United States is getting up to speed, as is the tinting machine plant Corob North America Inc. Tikkurila CPS (SEA) Pte Ltd started up colourant production in Singapore in the late 1999.

The situation in the main market in Europe was according to expectations, but in Eastern Europe market disturbances, particularly in Russia, had somewhat of an impact on sales volumes. The market in South America and Asia was affected for most of the year by the weaker economic situation, causing growth to fall somewhat short of expectations.

CPS has launched new systems in nearly all its markets, and the use of systems that are already on the market has increased. In several markets CPS has only just started ascending its growth curve.

For economic reasons, the paint industry has invested cautiously in machines, and especially the introduction of new tinting systems has slowed down or been postponed. Branches of industry outside the paint industry have discovered large tinting equipment, and sales of colourants to other industrial sectors, particularly to the leather industry, have also increased substantially.

# OUTLAYS FOR DEVELOPING THE DOMESTIC AND EXPORT MARKETS

Tikkurila seeks to be always a step ahead of others in matters related to the environment and quality. Most of its production and sales companies already have certified quality or environmental systems, or the development of such systems has been started.

In Vantaa, EUR 2 million was invested in the Monicolor plant which was built in 1975 and is still one of the world's most highly automated paint plants. The operations control system complete with software and equipment was modernized in line with future challenges. Concurrently, production capacity will increase significantly.

Tikkurila Paints has continued its long-term actions to strengthen its market position in Russia, and it has started construction works on a second paint plant in Ramenskoye, to the southeast of Moscow. The project, including equipment, will have a cost of about EUR 5 million. Plans call for starting up production at OOO Kraski Tikkurila in the first half of 2000.

Revamping of Temaspeed Colour Service, which was brought out on the industrial paint market at the turn of the year 1998-99, progressed according to plans. The environmentally sound Temaspeed tinting system that represents the latest technology in the field means an improvement in stock turnover and makes it easier than ever before to expand the product range by adding new products.

Product development on industrial wood finishes has been advanced by investing in a highly modern testing laboratory (Customer Service Center). By means of production-scale painting line equipment, product performance can be checked in various surface treatment conditions, at the same time offering customers the possibility of testing new solutions.

The Tikkurila CPS colourant plant that started up in Singapore towards the end of the year will serve the developing markets in Asia and the Indian subcontinent. In 1999 approval was given for investing in a new production unit that will be located in China.

Tikkurila CPS has started an extensive information system project that will be instrumental in supporting the

operations of its new worldwide organization. In addition, functional models and product solutions have been developed for different types of tinting systems.

New machines have been developed for point-of-sale tinting. At the same time, new solutions for tinting in plants have been developed.

# AN INCREASE IN SKILLED PERSONNEL

The Tikkurila Group had a payroll of 2,282 employees at the end of 1999, an increase of 100 on the previous year. The number of employees who worked in Finland was 938. The personnel's professional skill was further developed systematically. Tikkurila employees were the first within the Finnish paint industry to obtain professional qualification in the chemical industry.

# THE ENVIRONMENT AND QUALITY ARE KEY AREAS FOR PRODUCT DEVELOPMENT

Environmental aspects were again the motive force behind Tikkurila Paints' product development in 1999. Aesthetic requirements have also been gaining prominence.

A number of interior paints have M1 approval, meaning that their emissions are minimal. In the development of exterior paints, particular attention has been paid to technical quality and weather resistance.

The emphasis in Tikkurila Coatings' product development has been on industrial coatings and paint systems that bring significant reductions in solvent emissions whilst improving the quality and durability of surface treatment as well as overall economy.

Products developed for the metal industry include water-borne stoved enamels and air-drying dip coatings as well as so-called high-build coatings that enable customers to achieve the required film thickness and quality even with a single application. Product development within industrial wood finishes has centered particularly on water-borne and UV-cured products in cooperation with customers. A new generation PVC plastisol that has an extended lifetime was brought out on the market and the new coil coating complies with the very latest in health and environmental protection requirements.

At CPS too, sales of environmentally compliant alternatives are growing continuously. Accordingly, the bulk of the resources employed in developing

colourants goes towards these products.

Customized solutions and flexibility are increasingly important aspects of the tinting business. Paint Composer, a system that enables the user to select not only the colour of paint but also its grade or other characteristics, is already available in a demo and pilot version at Tikkurila.

Tikkurila's R&D expenses amounted to 3.3% of net sales in 1999.

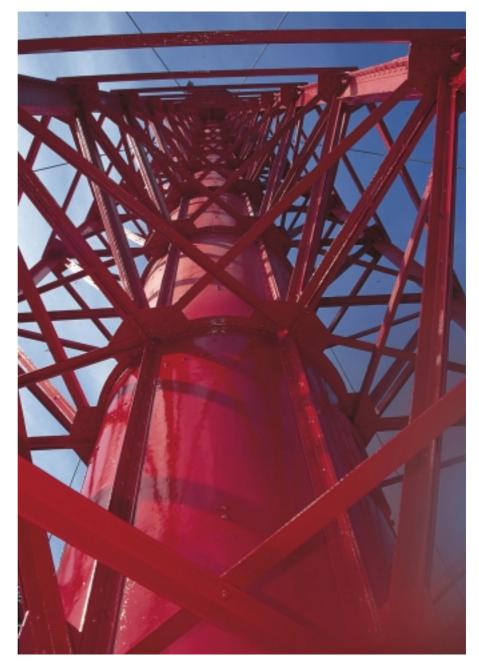
The changeover to the year 2000 took place without problems.

# THE FUTURE PROMISES STRONG GROWTH

The paint industry is one of CPS's main client sectors. In some cases the development of both the paint and tinting business has been clearly hampered by the conflict of interest arising from this dual role. This is why Kemira has decided to separate these business areas clearly apart from each other. How this is to be done will probably be worked out during the first half of 2000.

The worldwide reorganization of the tinting business has resulted in a more market-oriented way of working, and it is believed that this will bring positive results. In the years ahead, strong growth in sales is anticipated in North and South America as well as Asia, and the prospects in Europe too are very favourable. Because marketing inputs only begin to produce results over the medium term, CPS has made outlays on cultivating several new market areas. The current year is expected to bring strong growth that also has good potential further out.

Tikkurila Paints decorative paints and Tikkurila Coatings' industrial coatings have promising growth prospects in Eastern Europe, especially in Poland and Russia. Growth within industrial coatings is also anticipated in the Baltic countries. The Tikkurila companies are striving to reinforce further their position in their existing markets. Concurrently, Tikkurila is on the lookout for new business opportunities and new market areas.

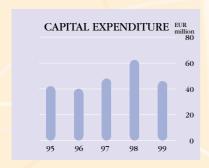


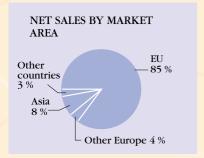


The Valassaari Lighthouse on the west coast of Finland is the work of Henri Lepaute, who designed the Eiffel Tower. Thanks to paints supplied by Tikkurila Coatings, the graceful structure that was completed in 1886 will live on for years.

In the summer of 2000 the European Swimming Championships will be held at the Mäkelänrinne Swimming Hall in Helsinki. Tikkurila Coatings supplied products that were used in painting the hall's ceiling structures, and Tikkurila Paints' products were used on the indoor walls.

# NET SALES EUR million 1200 Net sales % 1200 1000 9 800 6 600 3 400 0 200 95 96 97 98 99





# **MANAGEMENT**

President: Risto Keränen Vice President: Rauno Valkonen Agriculture: Timo Lainto Horticulture: Hannu Virolainen Process Chemicals: R.A. Chorlton



Risto Keränen

# **KEMIRA AGRO**

# LOW PRICES PUSH THE RESULT INTO THE RED

Kemira Agro's net sales remained slightly below the previous year's level and were EUR 1,015 million (1,030 million in 1998). The company reported an operating loss of EUR 39 million (operating income of 19 million in 1998). The figure includes EUR 39 million of non-recurring net costs that were mainly incurred in closing the Pernis plant.

# CONVENTIONAL FERTILIZERS DOWN, SPECIAL PRODUCTS UP

Agriculture. The sales and also the profitability posted by Kemira Agro's largest strategic business unit declined further.

The use of nutrients worldwide declined by about 2%. The weak situation of agriculture has led to a shrinkage in the demand for fertilizers, putting pressure on prices. For example, the prices of maize and soya were the lowest in a decade. In addition, there was an abundance of grain in storage.

It was a difficult year for the world's fertilizer industry. Prices fell further, by 5-15 %, particularly within nitrogen fertilizers in Western Europe and they ended at an all-time low level. China remained absent from the urea market, and this also cut into the demand for nitrogen. At the same time, new ammonia and urea capacity came on stream. The price of natural gas was very low in Russia, making production there very competitively priced.

In the EU the 10% compulsory setaside acreage requirement is continuing up to 2006. The import of fertilizers to Europe has remained at the same level as in previous years, about 25% of aggregate use. The use of nitrogen in Western Europe declined by slightly less than a per cent, the use of phosphorus by about 2% and the consumption of potassium by about 4%. The consumption of nutrients in Western Europe is continuing to fall at an annual rate of 0.5-1%. Concurrently, the efficiency of fertilizer use is improving.

Owing to contracting markets and persistently large imports, Western Europe now has substantial overcapacity in fertilizer production. The association of European fertilizer producers, EFMA, defended Western Europe's markets, especially against East European producers, by initiating a number of anti-dumping projects, with partial success. Towards the end of the year, plant closures and plans to close down capacity were announced. These will bring a total reduction of about 1.5 million tonnes in the aggregate production volume. The calculated overcapacity in Western Europe is about 3 million tonnes.

After several years of holding fairly steady, the price of diammonium phosphate headed downhill in the second half of the year. The slide has nevertheless now evened out. The fall is due to new capacity in India, Australia and Morocco that is coming on to the market. The price of potassium remained stable throughout the year. The EU has set a minimum price on potassium imports, and this has helped to keep prices at a reasonable level. The market situation for potassium sulphate has nevertheless been weak, mainly owing to the lack of purchases by China, and the prevailing situation has sent prices downwards.

The weak profitability of the nitrogen fertilizer business also led to major closures of capacity in the United States. Kemira Agro decided to close down the sulphuric acid, phosphoric

KEMIRA AGRO					
EUR million	1999	1998	1997	1996	1995
LOK IIIIIIOII	1777	1770	177/	1770	1,,,,
Net sales	1,015	1,030	1,079	1,056	1,030
Cost of sales	-990	-954	-941	-871	-849
Depreciation	-64	-57	-53	-59	-71
Operating income	-39	19	85	126	110
Net financing expenses	-20	-17	-21	-23	-27
Income before extraordinary items	<b>-5</b> 9	2	64	103	83
Capital invested (average)	663	645	602	595	652
Return on capital invested %	-5	5	14	21	18
Capital expenditure	47	62	48	40	42
Personnel (average)	2,951	3,071	3,117	3,415	3,475

acid, diammonium phosphate and NPK fertilizer production at the Pernis plant in the Netherlands.

Kemira Agro's overseas exports grew substantially (35%) compared with the previous year, especially thanks to the positive trend in exports to China. On the other hand, the business in the Baltic countries and Poland slumped because the use of fertilizers contracted as a consequence of the fall in food exports from these countries to Russia. The recession caused financing difficulties for retailers and wholesalers, and Kemira Agro's previously small provisions for credit losses notched up in 1999. The fertilizer market in the Baltic countries and Poland also felt the brunt of competition from Russia.

The devaluation of the rouble made the export of fertilizers from Finland to Russia unprofitable. Kemira Agro has launched a capital project for building a blending plant in the vicinity of Moscow in order to ensure a presence in this developing market area. The products to be put on the local market will mainly be intended for special cultivation and home garden-

Sales on the Finnish market fell by about 6%.

Horticulture. Kemira Agro's Horticulture business unit developed in line with plans. Sales grew by 28% and profitability remained good. There was growth especially in the demand for fully water-soluble fertilizers that are added to irrigation water. The price level held fairly steady throughout the year.

Process Chemicals. Operations of the Process Chemicals business unit mainly comprise intermediate and end products of the nitrogen industry as well as inorganic acids. The products have enjoyed good demand, but the weak market situation for fertilizer nitrogen has been reflected clearly in the form of increased competition. Accordingly, product prices have fallen to some extent. The unit has neverthe-



An NPK compound fertilizer plant based on a new cost-efficient process started up in Malaysia. Its products will be used in oil palm and vegetable plantations. According to Kemira's new strategy, speciality fertilizers such as NPK are one of the operational priorities.

less kept up its good profitability. The Process Chemicals business will be transferred away from Kemira Agro as part of the ownership arrangements being made in the nitrogen industry.

# IMPROVED PRODUCTION RELIABILITY

Within production the emphasis was on improving safety, reliability, quality and cost management. Total output grew despite the closure of NPK fertilizer production at Pernis. The accident rate fell by 44% and during the second half of the year it was already at a good international level. In materials handling at the Rozenburg plant a fire broke out in the first part of the year, though its effect on deliveries was nevertheless minor. A very regrettable accident that claimed the life of

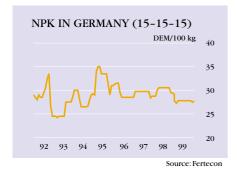
one man occurred in Uusikaupunki on 11 January 2000.

The changeover to the year 2000 took place without information technology problems.

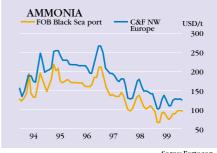
An expansion of potassium nitrate production at Fredericia and a modernization of the Uusikaupunki fertilizer line contributed to bringing the plants' production up to good levels of output and quality during the year.

# **HIGH AMMONIA** PRODUCTION COSTS

Higher oil prices raised the price of natural gas and the trend is continuing. This has an essential impact on the production costs of ammonia, particularly in continental Europe. At the same time, the average price of ammonia has been at its lowest point since







Sorce: Fertecon

1993. New ammonia capacity is coming on stream in Indonesia, Malaysia, Argentina and Venezuela, and this will fuel oversupply on the market. Capacity has already been closed and it is expected that more closures will be made in future.

# CONCENTRATING ON SPECIALITY FERTILIZERS

In accordance with the new strategy that Kemira announced in October, Kemira Agro's speciality fertilizers will be one of Kemira's business priorities. New ownership alternatives will be sought for the nitrogen fertilizer business, which comprises about half of Kemira Agro's present net sales.

To facilitate the implementation of Kemira's new strategy, in January 2000 the Kemira Agro organization was divided into two business areas: speciality fertilizers and nitrogen fertilizers.

Agriculture expands into the Far East. During the year an NPK plant based on a new cost-effective process started up in Malaysia. The plant is a joint venture with Kuok (Singapore) Limited. The construction works on the NPK plant in China were able to move ahead in the autumn when the cooperation partner's share of the financing came through. Together with Finnfund, Kemira owns a 75% stake in this joint venture that will go into operation in the autumn of 2000.

Commercialization and further de-

velopment of the KEMIRA LORIS satellite-controlled precision fertilizing system was continued in the European market.

In Finland Kemira Agro purchased a 20% stake in the Suomen Rehu feed business with the aim of strengthening cooperation in logistics and marketing.

Horticulture strengthens its position in the Middle East. The Horticulture business is growing mainly in areas outside Europe, where its sales and marketing organization is being reinforced.

Potassium nitrate production was expanded successfully in Denmark, where production will be boosted further through a new investment project that will start up in the autumn of 2000.

New projects that will expand the production of fully water-soluble fertilizer components got under way in Jordan and the United Arab Emirates. In Jordan the partner in cooperation is Arab Potash Company. The plant, which will become operational in 2002, will manufacture potassium nitrate and dicalcium phosphate, with sales of the latter product being handled by Kemira Chemicals. The product to be produced in the United Arab Emirates is urea phosphate, and the partner of Kemira Agro and its associated company Union Kemira is Emirates Food Company. The plant will start up in 2001.



Within Kemira Agro's research effort, alongside conventional R&D activities an essential part is played by the Ventures unit which concentrates on carrying ahead longer-term research projects that have a higher risk. Kemira Agro's business based on speciality fertilizers will call for a relatively larger research outlay in future. At present about 1% of net sales is spent on research.

# A POSITIVE OUTLOOK FOR SPECIALITY FERTILIZERS

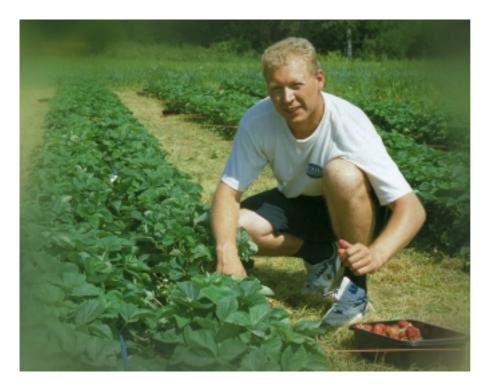
There is not expected to be any essential improvement in the world market for agricultural products during 2000.

Recently a number of West European producers (apart from Kemira, Norsk Hydro, BASF, Fertiberia) have announced closures of plant capacity, sending prices upward. On the other hand, China is cutting down on imports of NPK fertilizers, which means that volumes are likely to be smaller than previously. China is also expected to be absent from the urea market. Nor is any change likely to take place in the sharply reduced use of fertilizers in Russia in the near future.

The Horticultural fertilizer business is set to continue developing favourably.

Kemira Agro's EUR 34 million profit-boosting programme has progressed according to plans and its full impact on earnings will feed through in 2001.

Kemira Agro's strategy is to withdraw from the nitrogen fertilizer business in part or completely. This will have major implications for Kemira Agro's business orientation. Henceforth the company will concentrate on developing its speciality fertilizer business.



Kemira Agro's business based on speciality fertilizers will call for a relatively larger research outlay in future. The use of slow-release fertilizer in growing strawberries is being monitored on Kemira's test farm.

# **KEMIRA PIGMENTS**



Kemira Pigments continually develops new products to meet its customers' needs. Development work on two new grades of titanium dioxide pigment was completed and the products were presented to customers.

# **OPERATING INCOME UP 50%**

Kemira Pigments had net sales of EUR 488 million, an increase of 15% on the previous year (1998: EUR 423 million). The average prices of titanium dioxide pigment remained at roughly the previous year's level, but Kemira Pigments' sales volumes grew substantially. Operating income rose by 57% and

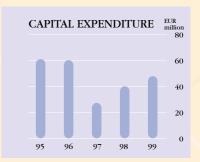
was EUR 35 million (1998: EUR 22 million).

# DEMAND IS GROWING SLOWLY

Over the past 10 years demand for titanium dioxide pigment has nevertheless grown at the same rate as gross domestic product in the industrial countries, which are the largest users

KEMIRA PIGMENTS					
EUR million	1999	1998	1997	1996	1995
Net sales	488	423	412	355	383
Cost of sales	<b>-407</b>	-357	-374	-318	-305
Depreciation	<b>-46</b>	-44	-44	-40	-35
Operating income	35	22	-6	-3	43
Net financing expenses	-20	-19	-21	-19	-17
Income before extraordinary items	15	3	-27	-22	20
Capital invested (average)	403	385	400	411	392
Return on capital invested %	9	6	-2	-1	11
Capital expenditure	46	40	27	60	6
Personnel (average)	1,752	1,794	1,851	1,939	1,971







# MANAGEMENT

President: Frits Visser Sales & Marketing: Matti Lapinleimu Savannah plant: G.L. Roberts, III Pori plant: Jukka Lehtonen Rotterdam plant: Philip Bouman



Frits

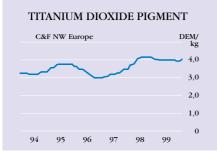
of TiO<sub>2</sub>. The growth has thus been even, but fairly modest. According to estimates at the moment, worldwide consumption of TiO, will grow over the long term by 2-3% and will scarcely rise at a faster rate later on, either. On the other hand, there can be great annual fluctuation in demand owing to the cyclical sensitivity in this industry.

#### THE MARKET PICKS UP

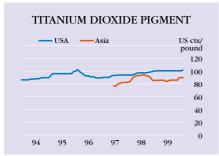
Demand for titanium dioxide pigments rebounded after the downhill slide a year ago. The first part of the year was slow, but towards year-end all producers, Kemira Pigments included, were hard pressed to satisfy the strong demand. This was attributable both to the trend in the TiO2 cycle itself and also to the fact that the main customers, i.e. the paint, plastics and paper industry, topped up their stocks to be prepared for the millennium changeover.

Although the TiO, industry has become increasingly global, the markets nevertheless behave in different ways in different parts of the world. In North America there was good demand throughout the year, and in Asia demand improved markedly towards the end of the year, whereas the Latin American market was flat.

Price increases were carried out in all the markets. The rises started off in Asia in the summer, with Europe following suit in the autumn and last of all, at the beginning of 2000, prices in the United States headed upwards. In Latin America too prices are rising, though slowly.



Source: ICIS-LOR Group Ltd



Source: ICIS-LOR Group Ltd

## CONSOLIDATION IN THE INDUSTRY

Consolidation is moving ahead in the titanium dioxide industry. In the autumn the Kemira Group announced its change in strategy, according to which the Kemira Pigments business no longer belongs to the Group's core business areas. Ownership arrangements concerning the Kemira Pigments business are in progress, and it is believed that they will be carried out during 2000.

A major acquisition was made in the industry during the report year when the world's third largest producer - Tioxide - was ultimately sold to Huntsman Chemicals.

#### **BOOSTING PRODUCTION EFFICIENCY**

The structural transformation projects under way at all sites moved ahead according to plans. The objective of the projects is to cut annual costs by a total of EUR 44 million by the start of 2001 at the latest. The Pori plant will account for about EUR 17 million of this figure. The efficiency boosting programme at Pori has already been largely completed.

Debottlenecking at the Pori plant was completed in December, raising the plant's production capacity to 120,000 tonnes a year.

Because sales of speciality products have developed favourably, additional investments have been made in the UV-Titan business. Even though speciality product capacity at the Pori plant is currently being doubled, it was decided to expand it further. The extension works have progressed smoothly, and the new capacity will come on stream in the latter half of 2000. The expansion of FinnTi production was completed during the report year.

# NEW PRODUCTS UNDER DEVELOPMENT

Worldwide and local product development programmes continued. Develop-

ment work on two new grades of titanium dioxide pigment were completed and the products were introduced to customers. The products are a multipurpose, high-gloss and high-durability KEMIRA 635 pigment which the Rotterdam plant manufactures for the paint industry and KEMIRA UDA Prime anatase slurry, which is produced by the Savannah plant for the paper industry.

New products that are marketed to the plastics and laminate paper industry and came on to the market in the previous year strengthened their position on this market.

The division pushed ahead with development work on pigmentary and transparent titanium dioxide grades, which are intended for uses in the plastics industry. In addition to plastic grades, the Speciality Products unit concentrated on microfine transparent titanium dioxide products that are used in paints and cosmetics. Development work was also done on titanium chemicals.

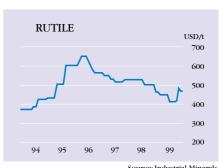
Test methods that are used in quality control were harmonized at all three production plants, promoting the communication of more uniform information to customers and further ensuring product quality.

Introduction of an SAP R/3 system went smoothly at all the Kemira Pigments units, both at plants and in the sales offices, during 1999. The changeover to the year 2000 went without any problems.

## POSITIVE EXPECTATIONS FOR 2000

Sales of titanium dioxide pigment got off to a brisk start during the current year. In spite of the US producers' stocks being larger than normally, fullyear expectations for 2000 are positive. The TiO<sub>2</sub> cycle is still in an upswing and the market is expected to remain good.





Source: Industrial Minerals

# KEMIRA METALKAT

Kemira Metalkat's favourable trend in operations continued in 1999 and we posted the best result in our history. Both net sales and operating income came in ahead of budget. Net sales

grew by 19% to EUR 36 million (30 million in 1998). Operating income was EUR 3.1 million (1.7 million in 1998).

Net sales during the past year consisted mainly of deliveries of catalytic converters to the European automotive industry. The long-awaited market for small combustion engines got under way and significant sales volumes are expected within a couple of years.

Metalkat's product range is extensive and series sizes vary greatly. For this reason, during the report year we paid particular attention to costs and the efficiency of manufacturing and operations.

Customer wishes were a special focus of product development. Catalytic



converter systems were jointly developed to meet the requirements of increasingly tougher emission norms. Several approvals of catalytic converters for small combustion engines were obtained from the authorities.

EUR 1.3 million was spent on capital projects. The investments were aimed at improving and ensuring high-calibre operations and quality in all subareas.

Net sales and earnings in 2000 will fall because certain car models for which we are supplying equipment will be removed from production, and new deliveries of the same size will not yet start up during the current year.

The development of the emission-control systems of the future in close cooperation with customers is one of Kemira Metalkat's key areas. The photograph shows a Maserati being tested at the Metalkat engine laboratory.

# **KEMIRA SAFETY**

Kemira Safety's result was satisfactory. Net sales were EUR 14.2 million (14.4 million in 1998) and operating income was EUR 0.9 million (1.3 million in 1998).

Military protective masks accounted for a smaller share of net sales, 6% as against 15% a year earlier. By contrast, net sales generated by respiratory protective devices for industrial use and other occupational safety applications continued their growth in all three product groups: masks, filters and powered respiratory protectors.

Thanks to product development and improvements in product safety, our sales increased in all the main market areas: Western Europe, Scandinavia and Finland. Large outlays on product development and marketing, coupled with the fast pace of capital expenditures on new products and production equipment nevertheless cut into our earnings in 1999.

We brought out on the market Proflow2, a new battery-powered motorized respiratory protector, and a new generation industrial protective mask – Promask. Both products won the unreserved approval of their users and a good position was established on the market. All three product groups now have strong core products: Promask within protective masks, the Pro2000 series within filters and the Proflow family within motorized respiratory protectors. Capital investments went for raising production capacity, new products and information technology.

We will be able to increase our market share in the current year, too. Net sales are expected to grow strongly in the main market area. We achieved an important foothold in the nuclear power industry in Great Britain, and we believe

Kemira Safety brought out on the market a new powered respiratory protector named Proflow2, as well as Promask, a new generation industrial protective mask. These products will contribute to strengthening the company's position as a European manufacturer of respiratory protective devices

that this will strengthen Kemira Safety's position as a European manufacturer of respiratory protective devices. In addition, we got off to a good start in the United States and Australia. This further boosts our growth potential. Earnings are expected to improve.



# **KEMIRA OYJ**

Kemira Oyj comprises Group management and administration as well as certain service functions. Kemira Oyj's net sales consist of the sale of electricity to the Group's companies in Finland and to outside companies. Net sales for 1999 were EUR 27 million (EUR 32

million), of which 52% came from outside the Group.

The parent company's paramount task is the Group's strategic management. It sets objectives for the Group and the subsidiaries, defines operating principles and contributes to exploiting the Group's internal synergies. In addition to the energy business, the parent company handles the Group's financing and certain other headquarters service functions.

Kemira Oyj employed 132 (133) people in the average.

# KEMIRA GROUP ENVIRONMENTAL REPORT 1999

#### INTRODUCTION AND PURPOSE

This report is the seventh consecutive annual environmental report by Kemira in the 90s. The structure of the reports has not changed, while the content has been gradually developed in accordance with the relevant European reporting guidelines<sup>1,2</sup>. In addition to this regular annual disclosure, Kemira issued a comprehensive standalone Product Stewardship report in 1999.

The environmental report deals with Kemira Group companies in line with the consolidation policy adopted in financial reporting.

# **SUMMARY**

The overall situation in environmental protection did not change substantially at the production sites. Most releases into water declined slightly from the previous year, while those into the air showed both minor increases and decreases. Hazardous waste generation increased due to one-time remediation activities and growth in fine chemicals production.

Major environmental investment projects were not conducted or initiated. Thus, the capital expenditures on environmental protection declined by about 16% from the previous year. This was counterbalanced by 8% growth in environmental operating costs.

The environmental business continued on a steady growth curve. Sales of environment and safety-related products totaled EUR 313 million (EUR 264 million in 1998).

The year was not fully satisfactory in respect of safety. The number of significant environmental spills and industrial accidents increased. In occupational safety, the number of lost-time incidents was reduced to all-time low levels, particularly in Kemira Agro. However, one employee died in an accident at the Uusikaupunki plant in Finland in January, 2000.

Many sites obtained ISO 14001 certificates or were actively developing environmental management systems.

Kemira was accepted as a component of the newly launched worldwide Dow Jones Sustainability Group Index. In Finland, Kemira again earned an award for good annual environmental reporting.

## **ENVIRONMENTAL STRATEGY**

Kemira published in October a new strategy, which is expected to have positive consequences also for the environmental protection and sustainable development activities within the Group. With the planned divestment of the nitrogen fertilizer and titanium dioxide businesses, the portfolio of the Group is becoming environmentally lighter. In practice, it is anticipated that most of the Groups' environmental re-

leases into the air and water will decrease significantly. A substantial reduction is also expected to take place in energy intensity and greenhouse gas releases, as well as in environmental costs. Actual changes will depend on the extent of realization of the planned reorganization, as well as on the precise nature of the projected business growth.

Furthermore, the strategic reorientation emphasizes growth in the environmental businesses. For example, clean water has been selected as one of the growth components. The strategy and core values of Kemira Chemicals, one of the growth companies, were also sharpened along these environment-driven lines.

# ENVIRONMENTAL POLICY AND MANAGEMENT SYSTEMS

Much of the progress continued to centre on developing ISO 14001 environmental management systems.

Within Kemira Chemicals, the Pulp & Paper business unit obtained ISO 14001 certificate covering its operations in Helsingborg. Certification of Industrial Chemicals is expected in 2000 at the same site. The hydrogen peroxide plant at Ulsan, South Korea, also got final approval for its plant-specific ISO 14001.

In the Kemwater business unit the Flix plant of Kemira Ibérica S.A. in Spain received EMAS and ISO 14001

- <sup>1</sup> CEFIC (European Chemical Industry Council): Health, Safety and Environmental Reporting Guidelines. November 1998.
- <sup>2</sup> "Communication on the Interpretation of Certain Articles in the Fourth and Seventh Accounting directives." European Commission, 98/C 16/04.

Figure 1

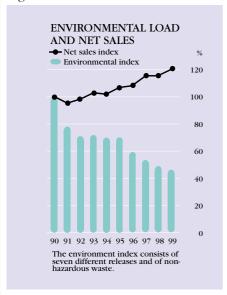


Figure 2

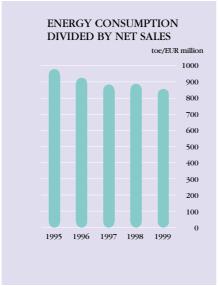
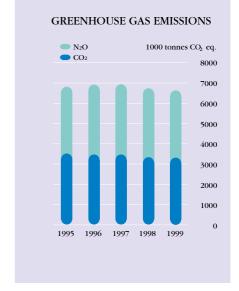


Figure 3



certificates. The Lauterbourg plant in France is preparing for certification in 2000. The Prerov plant in the Czech Republic obtained endorsement for the Responsible Care programme.

At the Siilinjärvi plants in Finland, a safety assessment was conducted according to the ISRS (International Safety Rating) system. The Oulu plant continued to incorporate ISO 14001 into the overall management system.

Kemira Pigments reached the voluntary targets set in the EMS system of the Pori plant in Finland. The plant also passed a safety audit according to the Seveso II directive and started application of the safety management system. At Kemira Pigments B.V., Rotterdam, the Netherlands, authority approval was obtained for the company environmental plan and a safety programme was started with the aim of fulfilling the national implementation of the Seveso II directive.

Kemira Agro started developing ISO 14001 for all major fertilizer plants in Europe. The Tertre plant in Belgium expects to be certified in 2000 and the Rozenburg plant in the Netherlands started a similar development effort.

# ENVIRONMENT PROTECTION AT THE PRODUCTION PLANTS

Kemira Chemicals. Kemira Kemi AB, Helsingborg, Sweden, successfully investigated possibilities for reducing waste to landfills. A permit was obtained for using significant amounts of waste and by-products as alternative raw materials. Permits to expand hydrochloric acid production were also issued. The planned expansion includes the construction of a new treatment plant for reducing the HCl emissions.

The Ulsan hydrogen peroxide plant in South Korea reduced energy and solvent consumption substantially by changing operational conditions. The Maitland plant in Canada completed a VOC survey and an environmental risk assessment, and it obtained a waste generation permit. Steam is now purchased from a neighbouring company, which is also responsible for associated emissions.

The Kemwater business unit reduced waste at Kvarntorp, Sweden, by starting the recycling of acidic sludge filtrate. The total recycling of aluminium hydrate allowed the Police plant in Poland to reach zero process waste disposal. The Rozenburg plant in the Netherlands also minimized waste by increasing its filtration capacity. The Fredrikstad plant in Norway renewed chlorine detectors. The Prerov plant in the Czech Republic obtained permits to double capacity and improved safety control.

Kemira Chemicals B.V., Rozenburg, completed five environmental improvement projects mainly to reduce VOC, noise and waste. A new chemical storage was also built.

The Oulu plants in Finland made improvements in odour and noise control as well as in safety equipment. Recycling of aluminum oxide and further processing of soot were investigated. The plant also obtained a waste management permit and submitted an application for a renewal of the waste water permit.

At the Siilinjärvi plants and mine in Finland, the extensive renovation of phosphoric acid and energy production facilities improved environmental and safety controls. Air and water releases remained very low, and enhanced water recycling diminished nitrogen discharges below target values. The plant also obtained a renewed waste water permit and an important new waste management permit. The latter, even if still not final, may impose new requirements for the rehabilitation of the piling and storage of areas for by-products and waste.

The Kokkola plant completed demolition of an old sulphuric acid unit, and removed 10,400 m³ of surface soil that was contaminated with mercury for final off-site disposal. In addition, a soil and ground water survey of heavy metals was conducted on the whole site without significant new findings. Sulphur emissions increased by one third due to temporary heat exchanger problems at the sulphuric acid plant.

Kemira Pigments. Kemira Pigments Inc., Savannah, made numerous modifications to prevent low pH excursions

Figure 4

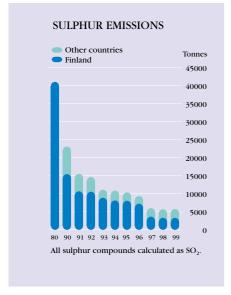


Figure 5

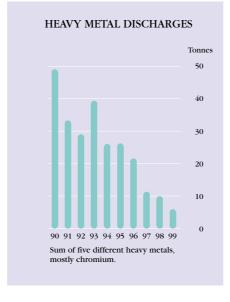
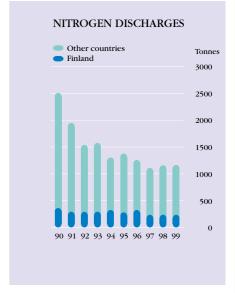


Figure 6



in plant ditches. Crossflow oxidation scrubbers were upgraded to improve chlorine control. An extensive soil and ground water survey on the site did not reveal significant reportable contamination. The authorities issued two consent orders and proposed two others, mainly dealing with occasional releases into the air.

The Pori plant managed to keep low levels in all releases after the major investment projects reported in previous years. The renewal programmes of digester gas scrubbing systems and jet mill dust separation were completed. Some difficulties were encountered in complying with the strict limit on NO<sub>v</sub> in power plant releases, requiring more efficient operational control. A project for building a new gypsum landfill was started. An important waste management permit was also obtained, mainly putting the EU landfill regulations in place for the piling and future rehabilitation of waste and by-products at the site. Sales of by-products remained at a high level thanks to the efforts of a new business unit.

Kemira Agro. At the Uusikaupunki plants, nitrogen discharges diminished because of closer spillage control. An estimated amount of 5 tonnes of phosphorus leaked accidentally into the sea from a broken phosphoric acid loading line in February.

The Harjavalta plant in Finland fur-

ther improved water recycling in its methylene urea production and reduced packaging waste. The plant also decided to take part in an extensive ground water management programme with the authorities, the city and other local industry.

The Fredericia plant in Denmark improved energy efficiency and investigated nitrous oxide emissions from its nitric acid production. Kemira S.A./ N.V. stopped production at the smaller sites in Longlier and Sombreffe in Belgium. The Tertre plant obtained a new waste water permit for the entire site and the company continued with soil and ground water investigations at both Tertre and Willebroek.

Kemira Agro decided to stop production at the Pernis site in the Netherlands, partly due to difficulties in meeting forthcoming environmental requirements in a profitable manner. Pending that, the plant continued with investigations and pilot-tests of gypsum re-use (Pro-Gips) and made preliminary surveys for reducing dust emissions and nitrogen discharges.

Kemira Agro Rozenburg B.V. installed low-NO<sub>x</sub> burners in its boilers to reduce NO<sub>x</sub>-emissions by about 50%. The plant had two environmental incidents leading to major spills of nitrogen into the water, and complaints were made of heavy smoke caused by the fire.

In the UK, the Ince plant investi-

gated possiblities to reduce air emissions from the NPK plant and  $NO_x$  from the ammonia production. The Environment Agency issued tighter limits for  $NO_x$  from nitric acid production as well as for ammonia discharges into surface water. The bunding of storage tanks was scheduled to the end of 2001.

Tikkurila. VOC emissions from Tikkurila's production continued to decrease in 1999. One objective of the modernization of the plant automation at the Tikkurila Paints plants in Vantaa, Finland and Szczecin, Poland was to reduce environmental releases. Similar improvements were made by Tikkurila Coatings at Bury in the UK.

# PRODUCT DEVELOPMENT AND ENVIRONMENTAL BUSINESS

For a comprehensive discussion of this topic, the reader is referred to our specific report entitled 'Products and the Environment'.

Sales of environment- and safety-related products and services totalled EUR 313 million in 1999 (see Figure 12). Growth accelerated to 19% thanks to a step-up in chlorine-free bleaching agents, water treatment chemicals and environmental equipment. Environment-driven businesses now account for more than 12% of the Group's net sales.

Market growth, price development and the first full year of consolidation

Figure 7

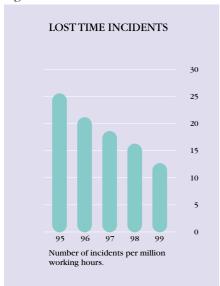


Figure 8

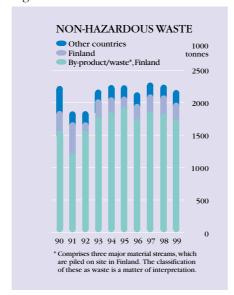
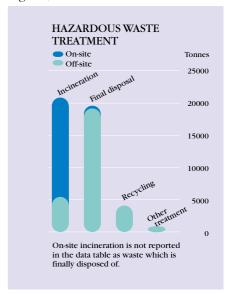


Figure 9



of the two newly acquired plants boosted the sales of hydrogen peroxide by Kemira Chemicals by as much as 75%. The Kemwater business unit continued its solid growth, with sales up 10% on the previous year, mainly by building new production facilities and strengthening the existing markets around the world. Recycling and use of secondary raw materials (the Green Concept) was intensified. The first full-scale municipal sludge recovery and treatment process (Krepro) will be built by Kemwater for the city of Malmö, Sweden.

Strong growth also continued in the environmental equipment businesses of Kemira Metalkat and Kemira Safety. Sales of catalytic converters and personal protection devices rose by 15-20%.

Sales of co-products and products developed from waste decreased by about 10%. On the other hand Kemira Agro Horticulture advanced substantially the sales of biocontrol products and organo-mineral fertilizers.

Tikkurila Paints concentrated on expanding the market for indoor paints that are free of solvents as well as alkylphenoletoxylates. Tikkurila Coatings focused on industrial coatings and coating systems which can substantially reduce solvent emissions in painting while at the same time improving durability, quality and the overall economy of the final applica-

tions. Customers are increasingly adopting this approach to comply with the EU's VOC-directive.

# DATA<sup>3</sup> ON ENVIRONMENTAL RELEASES, WASTE, ENERGY AND SAFETY

The overall production volumes were practically the same as in 1998. Three newly acquired, medium-sized sites were included in the reporting system for the first time. However, most of the reported environmental indicators here can reasonably well be compared to the figures for the previous year.

Not unexpectedly, total energy consumption remained at the same level as in 1998. However, the Group's eco-efficiency, measured in terms of energy use per net sales, improved by 4 percentage points.

Releases of sulphur compounds, nitrogen oxides and dust into the air increased slightly after sharing a continuous downward trend in the 1990s. The same was true for carbon dioxide, but these increases were not significant. Volatile inorganic emissions decreased to an all-time low due to improved gas scrubbing within Kemira Agro. Volatile organic compounds also diminished further, thanks to Tikkurila's production efforts.

Waste water volumes and releases were somewhat lower than in 1998. This was especially true for nitrogen and the sum of most toxic heavy metals, which was halved. Discharges of phosphorus were up slightly, mainly originating from production at Kemira Agro Pernis. The closure of this site will be reflected in significantly reduced Group totals for phosphorus, suspended solids and certain heavy metals in 2000.

Non-hazardous waste generation remained static. By-products of the two key sites in Finland diminished mainly due to water mass balance differences, as waste figures are given on a wet basis. Deliveries of hazardous waste for external final disposal and incineration increased substantially. This is largely explained by a one-time removal of contaminated soil from the Kokkola site in Finland and the growth in Kemira Fine Chemicals' production.

The environment index in Figure 1 summarizes the developments explained above. The value of the index is practically the same as in 1998, while the business volume is almost 5% higher. The environmental performance of the Group improved by more than one half during the 1990s, and this trend is expected to continue due to the announced changes in the business portfolio.

<sup>&</sup>lt;sup>3</sup> The data in this report have been compiled from statistics from many sites and sources. Whilst every effort has been made to ensure that the information is neither incomplete nor misleading, it cannot be considered as reliable as the financial data published in the Annual Report.



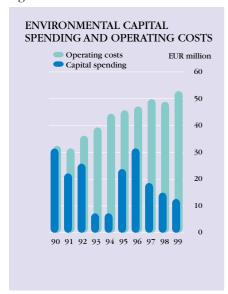


Figure 11

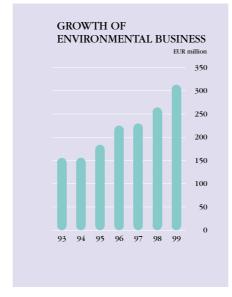
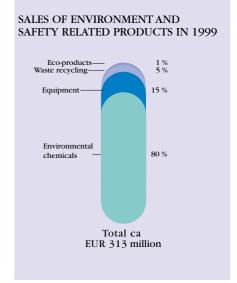


Figure 12



# ENVIRONMENTAL INVESTMENTS AND OPERATING COSTS

The Group's capital expenditures on environmental projects declined by about 16%, to EUR 13 million (Figure 10) or about 7.5% of all investments.

Environmental operating costs rose by approximately 8% to an all-time high of EUR 53 million. The increase was the most pronounced in the titanium dioxide and fertilizer businesses.

Environmental costs totaled EUR 65 million, with practically no change from the previous year. These costs correspond to 2.6% of Group net sales, on a par with the previous year. As the announced change in the Group's business portfolio will progress, these costs are expected to decrease further.

# ENVIRONMENTAL RISKS, LIABILITIES AND LEGAL ISSUES

Compliance and permits. Overall compliance with site-level permit conditions was satisfactory in 1999. A noncompliance situation was observed at four sites. The authorities have been informed and corrective action has been taken.

Kemira Pigments Inc., Savannah, received two final Consent orders regarding environmental issues as well as two proposals for such orders by Georgia Environmental Protection Division. One of the proposed orders, regarding a failed calciner stack test, was finalized in January, 2000.

New environmental permits or renewals of existing ones were again issued to many of the reporting sites, often spelling out tighter limits for specific releases.

The waste management permits issued to the Pori and Siilinjärvi plants in Finland contained significant requirements concerning future measures in the piling and rehabilitation of by-products and waste at the two sites. However, there were no conditions causing significant immediate action, and the Siilinjärvi permit is subject to an appeal in the Highest Administrative Court. The outcome of these cases cannot yet be fully predicted. At Kemira Agro Pernis, the plant closure has stopped all permit procedures, which were expected to have adverse effects on that particular business.

No significant difficulties were encountered in obtaining the necessary environmental permits to expand or to continue industrial operations.

Accidents, occasional releases and environmental impacts. The number of industrial accidents and environmental incidents reported by the sites increased from the previous year. The following cases caused local environmental impacts or concern:

- February: A broken loading line in the harbour of the Kemira Agro Uusikaupunki plant in Finland caused leakage of 5 tonnes of phophorus in the form of acid. This may increase eutrophication of the sea water close to the plant.
- April: A fire broke out in the fertilizer storage building of Kemira Agro
  Rozenburg, the Netherlands, causing
  property damage, heavy smoke formation and a spill of about 7 tonnes
  of calcium ammonium nitrate compounds into the river.
- September: Approximately 6 tonnes of fuel oil was found to have leaked into the river from a storage tank of the granulation plant at Kemira Agro Pernis, the Netherlands.
- September: 400 tonnes of urea ammonium nitrate leaked from a storage tank at Kemira Agro Rozenburg.
- November: A fire on the roof of the Kemira Pigments Pori plant in Finland caused property damage and smoke formation.

Other reported spills and accidents did not cause significant environmental impacts outside the plant areas. All accidents were investigated in detail and reported to the authorities, and appropriate insurance procedures have been undertaken.

Kemira Pigments Inc. had eight reportable releases of chlorine, caustic and sulphuric acid in Savannah, Georgia. The Group companies paid approximately EUR 0.2 million in compensation for environment-related damage, or in penalties.

Lost-time incidents showed a good trend, decreasing by about 22% from the previous year. However, a fatal accident occurred on 11 January 2000 at the Kemira Agro Uusikaupunki plant in Finland. One employee died after falling from the roof of a fertilizer sludge reactor during maintenance work. The Kemira Group deeply regrets this loss of life.

Environmental liabilities. Soil and ground water contamination and other risks associated with past activities have been assessed at all major Group-owned properties. Several com-

plementary investigations were reported on.

Mergers and acquisitions or plant closures did not change the environmental liabilities significantly in 1999. Detailed environmental due diligence projects were conducted in connection with the completed acquisitions and with the pending divestment of the titanium dioxide business.

At present, there is a requirement or commitment to undertake a limited clean-up at five sites, and appropriate provisions have been made. Remedial action or demolition were carried out at six sites. The costs of current clean-up activities are reported as environmental operating costs (see above). The Group also continued to build up a reserve for unforeseen remediation costs.

Kemira Chemicals removed soil contaminated by mercury at the Kokkola plants (see above), but the cost was not significant. Investigations of arsenic in the sediment of the small lake close to the Vaasa plants are continuing. Ground water clean-up was temporarily halted at Kemira Kemi AB, Helsingborg, Sweden, because of low residual levels achieved. In December elevated concentrations of hexachlorobenzene were found in the sediment, mussels and fish in the plants' harbour basin. Investigations of the sources and releases of organochlorine compounds are going on at Helsingborg and Kokkola.

At the Tertre plant of Kemira Agro in Belgium, manganese nitrate was found in waste water due to subsurface transport from a neighbouring industrial property.

Legal cases. There were no significant environmental legal cases pending against the Group companies.

Environmental taxes and fees. Environment-based taxes totaled EUR 11.5 million calculated on a net basis, on a par with 1998. Proposed increases in environmental taxation are not expected to hurt the competitive position of the Group.

# ENVIRONMENTAL COMMUNICATION

Kemira was pleased to become a component of the Dow Jones Sustainability Group Index in September. This new, worldwide index comprises 229 companies selected as top performers in different branches of business, based on extensive questionnaires and benchmarking surveys. The index has been designed to help ethical and sustainable investors globally.

Kemira's first Product Stewardship report (Products and the Environment) was issued in the summer. The response has been positive among many interest groups. The report gives information on the overall environmental life cycles of major products and discusses product development and chemicals management within the Group.

Kemira Oyj achieved a second award for good annual environmental reporting in Finland in a comparison of publicly listed companies. Kemira Pigments Oy was granted the first environmental award of the City of Pori for its good results in water protection and other environmental management.

The web pages of Kemira Oyj and the Group companies (www.kemira.com) contain a growing amount of business-specific environmental reports and other information for the customers and the public.



# ENVIRONMENTAL DATA FOR THE KEMIRA GROUP

Releases into water, tonnes         Chemical Oxygen Demand (COD)¹       •• 9,776       5,616       5,694       5,39         Nitrogen (N)       2,500       1,258       1,121       1,163       1,01         Phosphorus (P)²       4,952       1,717       1,993       1,933       1,96         Suspended solids, 1,000 tonnes²       934       795       841       799       77         Metals (Hg+Cd+Pb+Cr+As)       49       21       12       10       5.         Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)       •       48       66.         Releases into air, tonnes         Particulates       1,950       1,504       1,364       896       93         Sulphur dioxide (SO₂)³       23,138       9,106       5,765       5,630       5,68         Nitrogen oxide (NO₂)⁴       8,546       6,345       6,202       5,840       5,95
Chemical Oxygen Demand (COD)¹       ••       9,776       5,616       5,694       5,39         Nitrogen (N)       2,500       1,258       1,121       1,163       1,01         Phosphorus (P)²       4,952       1,717       1,993       1,933       1,96         Suspended solids, 1,000 tonnes²       934       795       841       799       77         Metals (Hg+Cd+Pb+Cr+As)       49       21       12       10       5.         Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)       ••       48       66.         Releases into air, tonnes         Particulates       1,950       1,504       1,364       896       93         Sulphur dioxide (SO₂)³       23,138       9,106       5,765       5,630       5,68
Nitrogen (N) 2,500 1,258 1,121 1,163 1,01 Phosphorus (P) <sup>2</sup> 4,952 1,717 1,993 1,933 1,96 Suspended solids, 1,000 tonnes <sup>2</sup> 934 795 841 799 77 Metals (Hg+Cd+Pb+Cr+As) 49 21 12 10 5. Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn) ••• 48 66.  Releases into air, tonnes Particulates 1,950 1,504 1,364 896 93 Sulphur dioxide (SO <sub>2</sub> ) <sup>3</sup> 23,138 9,106 5,765 5,630 5,68
Phosphorus (P)²       4,952       1,717       1,993       1,933       1,96         Suspended solids, 1,000 tonnes²       934       795       841       799       77         Metals (Hg+Cd+Pb+Cr+As)       49       21       12       10       5.         Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)       ••       48       66.         Releases into air, tonnes         Particulates       1,950       1,504       1,364       896       93         Sulphur dioxide (SO₂)³       23,138       9,106       5,765       5,630       5,68
Suspended solids, 1,000 tonnes²       934       795       841       799       77         Metals (Hg+Cd+Pb+Cr+As)       49       21       12       10       5.         Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)       ••       48       66.         Releases into air, tonnes         Particulates       1,950       1,504       1,364       896       93         Sulphur dioxide (SO <sub>2</sub> )³       23,138       9,106       5,765       5,630       5,68
Metals (Hg+Cd+Pb+Cr+As)       49       21       12       10       5.         Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)       ••       48       66.         Releases into air, tonnes         Particulates       1,950       1,504       1,364       896       93         Sulphur dioxide (SO <sub>2</sub> ) <sup>3</sup> 23,138       9,106       5,765       5,630       5,68
Metals (Hg+Cd+Pb+Cr+As+Cu+Ni+Zn)         • 48         66.           Releases into air, tonnes         1,950         1,504         1,364         896         93           Sulphur dioxide (SO <sub>2</sub> ) <sup>3</sup> 23,138         9,106         5,765         5,630         5,68
Particulates 1,950 1,504 1,364 896 <b>93</b> Sulphur dioxide $(SO_2)^3$ 23,138 9,106 5,765 5,630 <b>5,68</b>
Particulates 1,950 1,504 1,364 896 <b>93</b> Sulphur dioxide $(SO_2)^3$ 23,138 9,106 5,765 5,630 <b>5,68</b>
Sulphur dioxide $(SO_2)^3$ 23,138 9,106 5,765 5,630 <b>5,68</b>
Carbon dioxide (CO <sub>2</sub> ), 1,000 tonnes 3,445 3,508 3,326 <b>3,34</b>
Volatile organics (VOC) <sup>5</sup> •• 484 369 374 <b>32</b>
Volatile inorganics (VIC) <sup>6</sup> • • 4,305 3,508 3,152 <b>2,59</b>
Waste <sup>7</sup> tonnes
Hazardous waste, total 8,669 21,185 8,153* 8,795 <b>26,09</b>
- Off-site landfill • 12,105 4,274 5,117 <b>19,47</b>
- Off-site incinertion • 3,206 1,845 2,926 <b>5,63</b>
- On-site landfill • 2,390 362 375 <b>11</b>
2/0/ 1/72
, , , , , , , , , , , , , , , , , , , ,
Non-hazardous, 1,000 tonnes 2,254 2,159 2,308 2,278 <b>2,17</b>
Natural resources
Fuel consumption, ktoe <sup>8</sup> 1,758 1,791 1,777 <b>1,77</b>
Purchased electricity, TJ 5,300 5,500 5,700 <b>5,80</b>
Total, ktoe 2,101 2,148 2,146 <b>2,15</b>
Cooling water volume, million m³, appr. 407 399 393
Waste water volume, million m³, appr. 86 78 82 7
Safety
Number of incidents <sup>9</sup> per
million working hours 21.2* 18.2* 16.3 <b>12.</b>
Reference data, EUR million
Group net sales 2,087 2,266 2,420 2,413 <b>2,52</b>
Environmental capital expenditure 31.1 31.3 18.5 15.0 12.
Environmental operating costs 32.3 47.1 49.8 48.8 <b>52.</b>
Total environmental costs, % of net sales 3.0 3.5 2.8 2.6 <b>2.</b>

Estimate. In this case, mainly caused by inorganic discharges, and hence not a very relevant parameter for the Group.
 Originates mostly from phosphogypsum.
 All sulphur compounds calculated as SO<sub>2</sub>.

Nitric oxide and nitrogen dioxide calculated as NO<sub>2</sub>.

VOC is a sum of volatile organic compounds. Sum of ammonia, hydrogen chloride and six other simple inorganic compounds, mostly ammonia in this case.

Waste as defined in EU legislation. Reported figures do not include mining by-products, on-site incineration, waste which is further processed into products at the sites, or sold as a coproduct to external recycling. Figures are on wet basis. 1,000 tonnes of oil equivalent. Includes fuel as a raw material.

Incidents causing an employee absence of at least one day. These figures have been changed because of a redefinition.

# **VERIFICATION STATEMENT**

At the request of Kemira, we have reviewed the basis of the "Kemira Group Environmental Report 1999". The report is the responsibility of and has been approved by the Board of Directors of Kemira Oyj. The inherent limitations of completeness and the accuracy of the data are set out in the report.

Our review has consisted of the following procedures:

- making enquiries of management responsible for compiling the report;
- an examination of relevant supporting information;
- review in more detail of the systems for gathering and reporting environmental data at operating level at one site outside Finland and one site in Finland, selected by us.

Based on our review we are assured that:

- the statements made in the report are supported by underlying information;
- the data has been properly collated from information provided by the sites;
- for the two sites visited, data has been properly extracted from their information systems.

The report has been prepared in line with the *CEFIC Health, Safety and Environmental Reporting Guidelines*, excluding information on occupational illnesses and distribution incidents. Kemira's approach to reporting continues to be in line with the European Commission interpretative communication concerning certain articles of the fourth and seventh Council Directives on accounting and, where appropriate, meets the requirements of International Accounting Standard IAS 37 *Provisions, Contingent Liabilities and Contingent Assets.* It is our opinion that the Kemira Group Environmental Report 1999 gives, in all material respects, a fair and balanced view on the group's environmental performance.

Helsinki, 16 February 2000

KPMG WIDERI OY AB

Hannu Niilekselä Authorized Public Accountant

# SUMMARIES OF MAIN PRESS RELEASES

#### **JANUARY**

Kemira Chemicals' Kemwater business unit will build a coagulant plant in northern Brazil. The plant will produce solid ferric sulphate, which has been developed by Kemwater. The product will be used in the production of drinking water and in the treatment of municipal and industrial waste water. The capital expenditure is EUR 3 million.

#### **FEBRUARY**

Kemira Fine Chemicals Oy, a subsidiary of Kemira Chemicals, and Monsanto Europe S.A. signed a 5-year contract for custom-manufacturing of silthiopham, the active ingredient of Monsanto's new wheat fungicide. The value of the contract is EUR 33 million.

Tikkurila Coatings upgraded its tinting system for industrial coatings. Temaspeed Colour Service comprises modernised base paints, colourants, tinting equipment and software. The new system has only two base paints and 11 tinting colourants. The role of service is emphasized in the new concept.

#### MARCH

Kemira Pigments initiated a EUR 18 million efficiency improvement programme at their titanium dioxide pigments production plant in Savannah, Georgia. The programme is to be completed by the end of 2000.

Kemira Agro and the Italian manufacturer of water-soluble horticultural fertilizers Biolchim S.p.A. entered into an agreement whereby 50 % of Biolchim shares were acquired by Kemira Agro. Biolchim is Italy's most important manufacturer and distributor of water-soluble horticultural fertilisers. The Mediterranean is an important strategic area for the Kemira Agro Horticulture unit.

# APRIL

Tauno Pihlava was appointed as the new CEO of **Kemira Oyj** as from 1 January 2000.

Kemira Chemicals decided to invest nearly EUR 12 million in development of its Siilinjärvi site in Finland and ensuring that it remains competitive.

#### MAY

Risto Keränen was appointed as the President of Kemira Agro Oy and Frits Visser as the President of Kemira Pigments Oy as from 1 July 1999.

Kemira Chemicals signed a joint venture contract with Jiangsu Yixing Purifying Agent Plant and the Finnish Fund for Industrial Cooperation (Finnfund) for the founding of a company producing mainly inorganic coagulants for water treatment in the province of Jiangsu, China.

#### JUNE

The Supervisory Board of Kemira Oyj approved an investment in potassium nitrate and dicalcium phosphate production in Aqaba, Jordan. The new company will be held on a joint venture basis by Kemira and the Arab Potash Company in Jordan. Total investment in the plant will be EUR 90 million. A letter of intent concerning the investment was signed in 1998.

Kemira Agro announced its plan to close down the NPK fertilizer granulation plant in Pernis, the Netherlands, as well as the nitric acid plant and the ammonium nitrate plant connected with the NPK plant.

Kemira Oyj decided to start repurchasing the company's shares according to authorization granted at the annual general meeting of shareholders. The decision allows for a possible repurchase of a maximum of 2,576,000 shares through the Exchange at current market prices. This corresponds to max. 2 percent of Kemira Oyj's issued share capital. The shares will be used for the payment of bonuses to the personnel funds operating within the company.

Kemira Chemicals' strategic business unit Pulp & Paper Chemicals decided to invest about EUR 5 million in its Speciality Paper Chemicals plant in Vaasa, Finland to further expand its sizing chemicals business with emphasis also on AKD production efficiency and product quality.

**Tikkurila Coatings** and Technical Coatings Co. North America in the USA signed a cooperation agreement which includes exchanging information and manufacturing and promoting each

other's products in their respective areas of market dominance. The agreement covers special products for the metal-working industry, coil coating of sheet metal, and can coatings for metal packaging.

Kemira Chemicals and the City of Helsinki signed a letter of intent to establish a joint venture company in the water utilities field. Kemira Chemicals would hold 51% and Helsinki 49% of the proposed company. The company, Kemwater Services Oy, will make use of the special skills acquired by the parties in the field of drinking and wastewater purification.

## JULY

Emirates Food Company (EFC), Kemira Agro and Union Kemira entered into an agreement to establish a new joint venture company called Kemira Emirates Fertilizer Company (Kefco) in Dubai, United Arab Emirates. EFC will have a 50% shareholding in Kefco, Kemira Agro 30% and Union Kemira 20%. The company will start production of urea phosphate. The plant will be located in the Jebel Ali Free Zone in Dubai and its production capacity will be 30,000 t/a.

Tikkurila Paints established a subsidiary named OOO Kraski Tikkurila in Moscow. The new company will build facilities for paint production and warehousing in Ramenskoye, to the south-east of Moscow. Production is scheduled to start before the summer of 2000.

# SEPTEMBER

Kemira Chemicals' Kemwater unit announced it was making further investment in its plants in Pori, Finland and Rheinberg, Germany. Both plant manufacture coagulants for water treatment.

The Kemira Group was included as a component in the worldwide environmental Dow Jones Sustainability Group Index. This index assesses companies on the basis both of their economic factors and performance in sustainable development.

#### **OCTOBER**

A new company established by Avena Group and **Kemira Agro** acquired the animal feed producer Suomen Rehu Oy from Cultor Oyj, a subsidiary of Danisco A/S. Kemira holding of the new company is 20%.

Kemira decided to sharpen up Group strategy to improve competitiveness and profitability. The Kemira Group will focus on areas with sound growth prospects and below average dependancy on economic cycles. Kemira will seek growth in pulp and paper chemicals, water treatment chemicals, as well as in paints and coatings. Other areas of focus will include speciality fertilizers and industrial chemicals.

#### **NOVEMBER**

Malmö Water, the municipal potable and waste water company of the Malmö city, Sweden, decided to install the Krepro process for the treatment of sewage sludge. The total investment in Malmö is estimated at EUR 7.3 million. The Krepro process has been developed by Kemira Chemicals' Kemwater unit.

## **DECEMBER**

Kemira Chemicals will build a paper chemicals plant in Parana state, Brazil. The production of sizing and speciality chemicals used in papermaking will start by the end of 2000, generating a turnover of EUR 9 million at the first stage.

The supervisory board of Kemira Oyj appointed the new board for the company for the new term of office from 1 January 2000 on. The chairman of the board would be Sten-Olof Hansén and the Vice Chairman Niilo Pellonmaa, and the other members would be Eija Malmivirta, Anssi Soila, Timo Kaisanlahti and Tauno Pihlava. Esa Tirkkonen was appointed deputy to the CEO.

Kemira Agro announced its intention to bring to an end the production of phosphoric acid, sulphuric acid and MAP/DAP phosphate fertilizers in Pernis, the Netherlands, by July 2000.

Tikkurila was in negotiations for increasing its ownership in a paint factory in Szczecin, Poland. The jointly owned company Tikkurila Baltcolor Sp. z o.o. started operating a year earlier. According to plans, the negotiations aiming at a 100 per cent ownership by Tikkurila would be brought to conclusion in early 2000.

# JANUARY 2000

The Kemira Oyj Board of Directors confirmed the appointment of a management board. The task of the management board is to act in a preparatory capacity to the board of directors.

The management board consists of Tauno Pihlava, CEO, chairman, Esa Tirkkonen, Executive Vice President, deputy chairman, and members consisting of Group division presidents and senior vice presidents in Group management.

Kemira Agro was reorganized into two units: Kemira Agro Nitrogen (KAN) and Kemira Agro Specialities (KAS). Kemira Agro's commercial activities will continue as before.

**Tikkurila CPS** will invest into a new plant for tinting system components in Shanghai, China. Production is due to start in early 2001.

# FEBRUARY 2000

Kemira announced the sale of its titanium dioxide pigment production units and related businesses in Savannah, Georgia, USA and in Rotterdam, the Netherlands, to Kerr-McGee Chemical Corporation LLC. The purchase price is approx. EUR 400 million.

The press releases can be read in full on Kemira's Internet pages at www.kemira.com.



# **ADMINISTRATION**

According to the Articles of Association of Kemira Oyj, the company's affairs are managed by a Supervisory Board, a Board of Directors and a managing director. One or more deputy managing directors can be named for the company. The Supervisory Board is composed of a minimum of eight and a maximum of ten members, all of whom are elected by the Annual General Meeting for one year at a time, counting from the Annual General Meeting at which the election was held. The Annual General Meeting elects one member as chairman and a maximum of two vice chairmen.

The Board of Directors, which is elected by the Supervisory Board, comprises a minimum of four and a maximum of eight members. The Supervisory Board elects one member as chairman and one member as vice chairman.

#### SUPERVISORY BOARD

The task of the Supervisory Board is to oversee that the company's affairs are managed according to sound business principles and with a view to profitability, in observance of the regulations of the Articles of Association, resolutions of meetings of shareholders and other confirmed standing rules. It is the task of the Supervisory Board to decide, within the limits indicated by the Articles of Association, on the number of members of the Board of Directors, to appoint and dismiss the managing director, deputy managing directors and members of the Board of Directors as well as to determine their compensation. It also decides on matters concerning a considerable constriction or expansion of operations, and decides on instructions to be given to the Board of Directors concerning matters of wide-ranging import or which are important in principle. The Supervisory Board gives its statement to the Annual General Meeting concerning the parent company and consolidated financial statements and the Auditors' Report as well as decides on calling meetings of shareholders. The emoluments of the Supervisory Board are decided by the Annual General Meeting.

The Supervisory Board meets about six times a year. During the past financial year the Supervisory Board met eight times.

# BOARD OF DIRECTORS

The task of the Board of Directors is to prepare matters that will be dealt with at meetings of shareholders and meetings of the Supervisory Board as well as to see to the implementation of decisions of the meetings of shareholders and the Supervisory Board. Its task is also to appoint and dismiss other officers upon a proposal by the managing director and to determine their compensation. The Board of Directors handles those admin-

istrative tasks that do not belong to the Supervisory Board or which have not been assigned to the managing director or to other individuals. The Board of Directors decides on the transfer and pledging of property as well as grants and cancels authorizations to sign the company's business name. The Board of Directors also handles the other tasks in its competence under the Companies Act.

The Board of Directors is responsible for duly organizing the company's accounting and overseeing the management of its funds. The Board of Directors is also responsible for seeing to it that the company's financial statements give correct and sufficient information and that the income statement and balance sheet have been prepared in conformity with the acts and regulations in force in Finland and following the Group's uniform accounting practices, which are based on the International Accounting Standards (IAS).

The company maintains an internal control system for the purpose of ensuring the reliability of financial reporting and to provide protection against significant misuse or loss of company assets. The internal control system is supported by approved policies and procedures which are observed at all Group companies as well as by an internal audit department whose staff operate in accordance with the procedures and principles

confirmed by the Board of Directors. The Board of Directors of Kemira Oyj met 19 times during the financial year.

#### MANAGING DIRECTOR

According to the Articles of Association, the task of the managing director, whose title is Chief Executive Officer, is to manage and develop the company and the Group in accordance with the instructions and regulations issued by the Board of Directors. The managing director is responsible for ensuring that the interests of the company and the Group are taken into account at subsidiaries and associated companies that are owned by the parent company. The managing director likewise implements the decisions of the Board of Directors. The managing director of Kemira Ovi since 1.1.2000 has been Tauno Pihlava. The managing director's deputy has been Esa Tirkkonen from the same date.

#### **AUDITORS**

The Annual General Meeting elects as auditors a minimum of one and a maximum of three ordinary auditors and as needed one deputy auditor. One of the auditors must be an auditor approved by the Central Chamber of Commerce. The auditor of Kemira Oyj is the firm of public accountants KPMG Wideri Oy Ab, with Hannu Niilekselä acting as responsible auditor.



The members of the Board of Directors of Kemira Oyj in 2000: (from the left) Anssi Soila, Eija Malmivirta, Tauno Pihlava, Chairman Sten-Olof Hansén, Vice Chairman Niilo Pellonmaa and Timo Kaisanlahti. With the exception of Tauno Pihlava, the new Board members are non-excutive directors.

## SUPERVISORY BOARD

**Timo Kalli**, Chairman, b. 1947, farmer. Member of Parliament.

Kari Rajamäki, I Vice Chairman, b. 1948, M.Sc.(Admin.). Member of Parliament.

Hanna Markkula-Kivisilta, II Vice Chairman, b. 1965, M.Sc.(Pol.Sc.). Member of Parliament.

Helena Rissanen, b. 1949, chairman of the Union of Salaried Employees in Industry in Finland.

Risto Ranki, b. 1948, Licentiate in Political Science, B.Sc. Deputy Director General of the Ministry of Trade and Industry. Sirpa Hertell, b. 1955, horticulturist. Secretary General of the Green Women's Association.

Pekka Kainulainen, b. 1941, Lic.Tech. Managing Director: Oy Liikkeenjohdon koulutuskeskus Ab. Chairman of the Board: Amer Group Plc. Vice Chairman of the Board: Yleiselektroniikka Oy. Member of the Board: Oy Talentum Ab. 600 Kemira shares.

Mikko Långström, b. 1940, M.Sc.(Econ.), B.Sc.(Eng.). Managing Director: Longinvest Oy. 11,100 Kemira shares. Employee representatives (right of attendance and expression of views, no voting rights):

Pertti Kautto, b. 1945, safety manager. Represents managerial employees. 815 Kemira shares.

Jorma Luukkonen, b. 1945, work planner. Represents technical employees. 500 Kemira shares.

Oili Kuusjärvi, b. 1947, copyist. Represents clerical employees.

Jukka Virta, b. 1942, operator. Represents workers. 165 Kemira shares.

**Tauno Korhonen**, b. 1946, operator. Represents workers.

#### **AUDITORS**

KPMG Wideri Oy Ab, with Hannu Niilekselä, Authorized Public Accountant, acting as responsible auditor.

# **BOARD OF DIRECTORS**

Sten-Olof Hansén, b. 1939, D.Sc.(Econ.), Chairman. Chairman of the Board at Urho Tuominen Oy, Medinet International Oy, Vetcare Oy, Innomedica Oy. Member of the Board at Perlos Oyj, Liikesivistysrahasto, Turun Seudun Osuuspankki. 2,605 Kemira shares.

Niilo Pellonmaa, b. 1941, M.Sc.(Econ.), Vice Chairman.
Chairman of the Board at PMJ-Automec Oyj, Rocla Oyj.
Member of the Board at Finvest Oyj, Asko Oyj, Uponor Oyj, Menire Oyj.
11,000 Kemira shares.

Eija Malmivirta, b. 1941, M.Sc.(Eng.). Chairman of the Board at Merei Energy Oy Ltd. Member of the Board at VR-Group Ltd, Tosco Corporation. 500 Kemira shares.

Anssi Soila, b. 1949, M.Sc.(Eng.&Econ.). Chairman of the Board at Sponda Oy, Årcarton AB, Normet Oy. Member of the Board at Leonia Oy, Lindström Oy.

Timo Kaisanlahti, b. 1962, D.LL., M.Sc.(Econ.).
Government Counsellor at the Ministry of Trade and Industry.
Member of the Board at FY-Industries Oy.
Member of the Supervisory Board:
Mortgage Society of Finland.

Tauno Pihlava, b. 1946, M.Sc.(Eng.). Chief Executuve Officer of Kemira Oyj. 200 Kemira shares and 250,000 share options.

#### MANAGEMENT BOARD

Tauno Pihlava, Chairman. See above (Board of Directors).

Esa Tirkkonen, Vice Chairman, b. 1949, M.Sc.(Eng.) Executive Vice President and CFO of Kemira Ovi.

Juhani Kari, b. 1944, LL.M. Senior Vice President of Kemira Oyj.

**Yrjö Sipilä**, b. 1949, B.Sc.(Econ.). President of Kemira Chemicals Oy.

Raimo Piironen, b. 1949, B.Sc.(Econ.). President of Kemira Chemicals Oy.

**Risto Keränen**, b. 1949, Lic.Tech. President of Kemira Agro Oy.

**Frits Visser**, b. 1942, M.Sc. President of Kemira Pigments Oy.

#### OTHER GROUP ADMINISTRATION

Raija Arasjärvi, b. 1957, M.Sc.(Econ.) Finance

**Kari Autio**, b. 1945, M.Sc.(Eng.) Business Development

**Kaj Friman**, b. 1953, LL.M., B.Sc.(Econ.) Secretary to the Supervisory Board and Board of Directors Treasury and Group Communications

**Timo Leppä**, b. 1957, M.Sc.(Eng.), CEFA Corporate Planning

Timo Mattila, b. 1943, Lic.Tech. Chairman of the Board of Kemira Metalkat Oy and of Kemira Safety Oy.

Orvo Rauma, b. 1940, B.Sc.(Econ.) Human Resources

Aarno Salminen, b. 1956, M.A. Environmental Management

Eero Sipilä, b. 1953, M.Sc. Human Resources (from 1 March 2000)

Mikko Sivonen, b. 1941, M.Sc.(Eng.) Energy

#### **INSIDERS**

The statutory insiders of Kemira Oyj include the members of the Supervisory Board and of the Board of Directors (see above) as well as the Chief Executive Officer (see above) and his deputy, Esa Tirkkonen (1,075 Kemira shares).

In addition, the following persons are regarded as insiders (in parentheses the number of Kemira shares owned by the person):

Juhani Kari, Senior Vice President (1,075), Yrjö Sipilä, President, (1,575), Raimo Piironen, President, (250), Risto Keränen, President, (200), Frits Visser, President, (0), Raija Arasjärvi, Group Controller (660), Kaj Friman, Group Treasurer and VP Group Communications (1,702), Anneli Juutinen, Secretary (0), Liisa Karonen, Secretary (0), Arja Korhonen, Secretary (0) and Kirsti Laakso, Administrative Assistant (0).

# **INVESTMENT ANALYSIS**

The following banks and brokerage firms are known to have prepared an investment analysis of Kemira in 1999:

Alfred Berg Finland Oy Kluuvikatu 3 00100 Helsinki Finland

Aros Securities P.O. Box 786 00101 Helsinki Finland

D. Carnegie Ab Finland Branch Eteläesplanadi 12 00130 Helsinki Finland

Conventum Securities Ltd Aleksanterinkatu 44 00100 Helsinki Finland

Crédit Agricole Indosuez Cheuvreux International Ltd CU Building St Helens 1 Undershaft London EC3P 3DQ U K

Credit Suisse First Boston (Europe) Ltd One Cabot Square London E14 4QJ U.K. Den Danske Bank Holmens Kanal 2 – 12 1092 Copenhagen K Denmark

Dresdner Kleinwort Benson 20 Fenchurch Street London EC3P 3DB U.K.

Enskilda Research P.O. Box 630 00101 Helsinki Finland

Evli Securities Plc Aleksanterinkatu 19 P.O. Box 1081 00101 Helsinki Finland

Goldman Sachs International Peterborough Court 133 Fleet Street London EC4A 2BB U K

Handelsbanken Markets P.O. Box 315 00131 Helsinki Finland

Mandatum Stockbrokers Ltd P.O. Box 117 00121 Helsinki Finland Merita Securities Oy Fabianinkatu 29 B 00020 Merita Finland

Merrill Lynch International Ltd 20 Farringdon Road London EC1M 3NH U.K.

Opstock Securities Ltd P.O. Box 362 00101 Helsinki Finland

Salomon Smith Barney Victoria Plaza 111 Buckingham Palace Road London SW1W 0SB U.K.

WestLB Research GmbH Elisabethstrasse 44-46 40217 Düsseldorf Deutschland

# **GLOSSARY**

#### ACE

Agricultural, construction and earthmoving (equipment).

#### AKD wax

The active ingredient in AKD sizing used in paper manufacture. Sizing makes paper less water absorbing and controls its printing properties. AKD = alkylketenedimer.

#### Alkyd paint

An outdoor or indoor paint that is based on an air-drying alkyd binder. Alkyd is an oil-modified polyester resin. Alkyd paint dries faster than conventional oil paint.

## Aluminium sulphate

Mainly used in the paper industry. Also used as a coagulant in water purification. It is generally made from aluminium hydroxide using sulphuric acid.

#### Ammonia

A basic chemical that is produced from natural gas and is mainly a nitrogen-containing raw material in fertilizers.

# Ammonium nitrate (AN)

A nitrogen fertilizer.

#### Anatase

A certain type of titanium dioxide pigment used by the paper industry in particular.

#### Audit

A systematic, independent and documented inspection or evaluation in which operations are compared with given requirements or guidelines. An audit can be performed by an external party or by an internal expert.

# Calcium ammonium nitrate (CAN)

A nitrogen fertilizer. Ammonium nitrate into which powdered limestone is mixed as part of the production process.

## Calcium chloride

An industrial salt that is made from limestone using hydrochloric acid. It has a variety of uses such as in dust binding on roads, oil drilling and applications in the food-processing industry.

#### Can coatings

Can coatings for the beverage and food industry. The coating acts as an insulating layer between the food product and the can or cap.

# Carbon sink

A part of the earth that permanently removes carbon dioxide from the atmosphere and binds it in organic compounds. The most important carbon sinks are the world's oceans and forests.

# CEFIC

The umbrella organization of the European Chemical industry (Confédération Européenne des Fédérations de l'Industrie Chimique).

# Chemical Oxygen Demand (COD)

A quantity connected with waste waters. It mainly serves to measure the ability of organic substances to consume oxygen in water.

## Coagulant

Precipitates impurities in water.

#### Coil coating

A method of coating metal sheets.

# Compound fertilizer

A fertilizer that contains in every granule a number of elements that are essential for plants.

#### CPS

Colour Processing Systems.

#### Diammonium phosphate (DAP)

A nitrogen and phosphorus fertilizer for crops and horticulture.

## Dicalcium phosphate (DCP)

A raw material for animal feed, manufactured from raw phosphate and limestone.

#### ECF bleaching

Elemental chlorine free pulp bleaching.

#### ECOX

Product name for sodium percarbonate. Used as detergent bleach.

#### EHS

Environment, Health and Safety.

#### **EMAS**

(Eco-Management and Audit Scheme) An environmental management system that is based on a European Community regulation. Industrial companies can register for it voluntarily.

# **Environmental business**

The sale of products and services that are used directly for environmental protection or are closely related to it.

# Environmental chemical

A chemical that is used for environmental protection purposes or closely connected to it. For example, chemicals used in treating waste water.

# Environmental disclosure

A yearly report by a company on the releases caused by its operations as well as their environmental impacts, liabilities, costs, legislative compliance and other related environmental issues of major importance. It is becoming an increasingly integral part of the financial reporting.

#### Environmental

# management system

A company's regular, documented description of how it acts in managing environmental affairs. The main components are the drawing up of an environmental policy, the setting and measuring of objectives as well as auditing.

#### **Environmental report**

A company's public report that is freeform in terms of its content and deals with environmental issues connected with the company's operations. It is published either separately or as part of the Annual Report at discretionary intervals.

# Environmental technology

Equipment used for environmental protection purposes.

#### Ferix

Product name. Granular ferrisulphate, a water treatment chemical.

#### Ferrichloride

An iron-based water treatment chemical.

#### Ferrous sulphate

An iron-based water treatment chemical or a raw material used in such chemicals. It is generated as a byproduct in the manufacture of titanium dioxide pigment. Also used in feeds.

#### FinnTi

Product name for titanium dioxide pigment.

#### Formamide

A solvent and raw material used in the chemical and pharmaceutical industries, a derivative of formic acid.

#### Formic acid

Manufactured from carbon monoxide and methanol. Mainly used in silage additives as well as in the textile, pharmaceutical and rubber industries.

# Greenhouse gases

Gases that promote heating of the atmosphere, the most important of which are carbon dioxide, methane and laughing gas (nitrous oxide).

#### HAZOP

A risk analysis method that is used in the process industry to improve working methods and the technical safety of equipment.

# Hydrogen peroxide

A reactive oxygen chemical that is used especially in the environmentally sound bleaching of pulp, and also as a disinfectant and in environmental applications. Its raw materials are hydrogen and the oxygen found in air.

#### **IFA**

International Fertilizer Industry Association.

## Ilmenite

The raw material of titanium dioxide pigment, an ore which has a relatively low concentration of titanium.

#### ISO

The International Standards Organization.

#### ISO 14001

An International standard that defines the requirements of an environmental management system. A company or institution that complies with the requirements can obtain a certificate according to the standard.

#### **KREPRO**

The Kemwater Recycling Process separates metals, heavy metals, phosphorus and carbon out from waste water sludge and recirculates them for useful purpos-

#### LORIS (KEMIRA LORIS)

(Local Resource Information System) A satellite-controlled precision farming system.

#### Methylene urea

A slow-acting nitrogen fertilizer.

# Monocalcium phosphate (MCP)

A feed raw material that is manufactured using limestone and pure phosphoric acid.

#### Nitric acid

A basic chemical that is made from ammonia by catalytic combustion. An important intermediale in fertilizer manufacture.

#### Nitrogen (N)

An element that is essential for the growth of plants.

# Nitrogen oxides

Mainly nitrogen monoxide (NO) and nitrogen dioxide (NO<sub>2</sub>). Nitrogen gases that are formed as emissions in combustion and, for example, in the manufacture of nitric acid. Nitric oxides cause acidification and impair air quality.

# NK fertilizer

Fertilizer containing nitrogen and potassium.

## NPK fertilizer

A compound fertilizer containing nitrogen, phosphorus and potassium as its main nutrients. A number of trace elements can also be added to it.

# Organic mineral fertilizer

Composed of both organic substances (e.g. peat) and inorganic salts.

## Peracetic acid

A reactive acid chemical that is used in the environmentally sound bleaching of pulp.

# Phosphate

A phosphorus compound which occurs in natural ores and is used as a raw material in fertilizers, animal feeds and detergents.

# Phosphogypsum

A gypsum that is formed as a byproduct in the manufacture of phosphoric acid.

# Phosphoric acid

An acid that is manufactured from phosphate concentrate using sulphuric acid and is used as a raw material in products such as compound fertilizers, feed phosphates, detergents and processed foods.

#### Phosphorus (P)

An element that is essential for life. One of the three main nutrients in fertilizers. It is obtained by processing phosphatecontaining ores.

## Pickling liquor

An acidic solution that is used to surface coat metals.

#### PK fertilizer

Fertilizer containing phosphorus and potassium.

#### Plastisol

Precoated thin sheet for roofing.

#### Polyaluminium chloride

A chemical coagulant that is used in the treatment of drinking water and waste

#### POP

Persistent Organic Pollutant.

#### Potassium (K)

An element. One of the three main nutrients in compound fertilizers. It is excavated mainly in salt mines in the form of potassium chloride.

#### Potassium nitrate

A nitrogen and potassium fertilizer that is used in horticulture.

# Potassium sulphate

A sulphur and potassium fertilizer used in horticulture, or the raw material for fertilizer.

#### Process chemicals

Products that are primarily sold to the process industry, such as nitric acid, ammonia and technical urea.

Product name. Gypsum raw material used by the construction industry.

# Responsible Care (RC)

The chemical industry's voluntary, worldwide environmental and safety programme.

#### Rutile ore

A raw material in titanium dioxide pigment. It contains a large amount of titanium dioxide.

# Sodium percarbonate

A raw material in detergents. It is made from soda using hydrogen peroxide.

# Sodium tripolyphosphate (STPP)

Used in detergents as builder to soften the water. Prevents dirt particles from adhering back to the garment.

# Straight fertilizer

A fertilizer containing one plant nutrient.

# Sulphur dioxide

An industrial gas which is used mainly by the forest industry and is manufactured, for example, by burning elementary sulphur or by means of its recovery from process gases. It is also an acidification-causing emission that is produced when sulphur-containing fuels are burnt.

#### Sulphuric acid

A widely used basic chemical that is produced from sulphur dioxide gas. The raw gas is obtained from the roasting of certain ores, or by burning elementary sulphur.

#### Stabilization

Bringing to a permanent state. For example, the chemical composition of a hazardous waste can be changed or the solubility in water of the waste can be lowered by means of various treatment techniques

#### Tinting system

A method of producing coloured paint. The system comprises (base paints,) tinting colourants, tinting formulae, dispensing machines, shakers, colour matching systems, PC software, and colour cards.

TiO<sub>2</sub> Titanium dioxide.

# Titanium dioxide pigment

A white pigment. An important raw material in the manufacture of paint, paper, plastics and printing ink. It is manufactured from titanium-containing ores and slag in a complex process involving the use of sulphuric acid or chlorine and numerous auxiliary chemicals. The methods of manufacture are the sulphate process and the chloride process.

#### UC cured product

Lacquer or paint cured by ultra-violet radiation.

# Ultrafine TiO2

A very fine crystal titanium dioxide that is invisible in the product application and protects against UV radiation.

A single-nutrient fertilizer that contains a large amount of nitrogen and is manufactured from ammonia and carbon dioxide. It is also used in resin adhesives.

# Water chemical

A chemical used in treating water.

(Volatile Inorganic Compounds) These compounds include ammonia, chlorine and fluorine that are formed as emissions mainly from the processes of the basic inorganic industries.

# VOC

(Volatile Organic Compounds) These compounds are mainly solvents which in normal conditions evaporate into the air, notably with effects on the generation of ozone.

# **QUARTERLY FINANCIAL DEVELOPMENT** (The figures are unaudited)

# **EUR million**

	1999 I/99	II/99	III/99	IV/99	1998 I/98	II/98	III/98	IV/98
Net sales								
Kemira Chemicals	172.5	172.8	169.2	182.5	150.3	164.5	159.8	155.0
Tikkurila	79.0	97.1	101.7	79.7	91.1	99.8	101.1	68.5
Kemira Agro	289.9	268.7	215.4	240.6	330.0	275.8	218.4	206.0
Kemira Pigments	107.6	121.3	131.0	128.6	107.7	117.0	106.8	91.4
Other including								
eliminations	-9.3	<i>−</i> 7.5	-2.3	-12.3	-8.4	-9.6	-6.8	-5.7
Total	639.7	652.4	615.0	619.1	670.7	647.5	579.3	515.2
Operating income								
Kemira Chemicals	19.4	21.1	19.4	23.3	22.3	23.3	12.4	17.1
Tikkurila	1.9	11.2	15.3	-5.3	10.1	13.1	11.2	-1.8
Kemira Agro	5.1	2.1	-14.3	<i>–</i> 31.7	15.7	14.7	0.3	-12.0
Kemira Pigments	5.4	9.6	3.3	16.6	6.1	9.2	0.9	6.1
Other including								
eliminations	-2.2	-0.2	1.2	9.8	-0.7	-1.0	-0.8	1.9
Total	29.6	43.8	24.9	12.7	53.5	59.3	24.0	11.3
Financing expenses	12.6	12.1	12.3	15.4	12.8	11.0	11.1	15.8
Income before extra-								
ordinary items and taxes	17.0	31.7	12.6	<b>-2.7</b>	40.7	48.3	12.9	-4.5
Net income	11.8	19.6	8.8	-10.3	29.0	32.5	8.9	8.2
Earnings per share	0.09	0.15	0.07	-0.08	0.23	0.25	0.07	0.06

# THE HOLDING OF FRANKLIN RESOURCES INC.

Franklin Resources Inc. has notified Kemira Oyj that its holdings of the company's shares and voting rights on the dates below were as follows:

	Shares	% of shares	% of votes
01.04.1999			
Mutual fund holdings	3,864,502	3.00	3.00
Assets managed under agreement	4,351,248	3.38	3.38
Total			6,38
05.05.1999			
Mutual fund holdings	7,745,202	6.01	6.01
Assets managed under agreement	5,150,248	4.00	4.00
Total			10.01
27.05.1999			
Mutual fund holdings	7,719,002	5.99	5.99
Assets managed under agreement	5,146,808	4.00	4.00
Total			9.99

These shares are included in nominee-registered shares because Franklin Resources Inc. has not registered the shares it owns within the book-entry register kept by Finnish Central Securities Depository Ltd.

# **GROUP COMPANIES**

31 December 1999

Company Group h	olding %	Location		Company	Group h
Kemira Oyj		Finland, Helsinki		Kemira Agro Oy	
Kemira Chemicals Oy	100	Finland, Helsinki		Kemira Agro Holdings Ltd	
Kemira Kemi AB	100	Sweden, Helsingborg		Kemira Agro U.K. Ltd	
Kemira Chimie S.A.	100	France, Lauterbourg		Kemira Ltd	
Kemira Chemicals AS	100	Norway, Gamle Fredrikstad		Kemira Ireland Ltd	
Kemwater Cristal S.A.	73	Rumania, Bucharest		Kemira S.A./N.V.	
Alchim S.R.L.	73	Rumania, Tulcea		Battaille S.A.	
Societatea Comercala Chimbis S.A.	50	Rumania, Bistrita		Engrais Battaille S.A.	
Scandinavian Silver Eel AB	100	Sweden, Helsingborg		Kemira Engrais S.A.	
Aliada Quimica S.A.	100	Spain, Barcelona	•	Kemira Agro Holding B.V.	
Kemira Ibérica S.A.	100	Spain, Barcelona		Kemira B.V.	
Kemira lbérica Internacional S.L.	100	Spain, Barcelona	•	Kemira Pernis B.V.	
Aliada Quimica de Portugal Lda.	74	Portugal, Estarreja		Kencica Speciaalmeststo	
Kemira Chimica S.p.A.	100	Italy, Ossona		Kemira Deutschland Gn	
Kemifloc a.s.	51	Czech Republic, Prerov		Comercial de Fertilizantes	Liquidos S.A.
Kemwater Närke AB	92	Sweden, Kumla		Viljavuuspalvelu Oy	
Kemipol Sp.z.o.o.	51	Poland, Police		Mykora Oy	
Kemira Kopparverket KB	100	Sweden, Helsingborg	•	A. Jalander Oy	
Ahlbo Kemi AB	100	Sweden, Helsingborg	•	A. Jalander Eesti Oü	
Kemwater Brasil S.A.	51	Brazil, São Paulo		SiA Kemira Agro Latvija	
Kemwater de México, S.A. de C.V.	51	Mexico, Tlaxcala		ZAO Kemira Agro	
Kemwater ProChemie s.r.o.	60	Czech Republic, Bakov nad Jizerou		Kemira Agro Poland Sp. z	0.0.
Kemwater Diper Environmental Chemicals	Inc. 51	Turkey, Izmir		Kemira Sdn. Bhd.	
Kemira Fine Chemicals Oy	100	Finland, Kokkola		Kemira Agro Hungary Ltd	Co.
Kemira Chemicals (UK) Ltd	100	United Kingdom, Harrogate		AS Kemira Agro Eesti	
Kemira Chemie GmbH	100	Germany, Hanau		UAB Kemira Agro Vilnius	
Kemira Chemie Ges.mbH	100	Austria, Vienna		AS Fertimix	
Kemira Chem Holding B.V.	100	The Netherlands, Rotterdam	•	Biolchim S.p.A. <sup>2)</sup>	
Kemira Chemicals B.V.	100	The Netherlands, Rozenburg		Tikkurila Oy	
Prospector B.V.	100	The Netherlands, Rozenburg	•	Tikkurila Paints Oy	
Kemwater B.V.	100	The Netherlands, Rotterdam		AS Baltic Color	
Kemira Kemax B.V.	100	The Netherlands, Rozenburg	•	UAB Baltic Color	
Kemira Chemicals S.A./N.V.	100	Belgium, Wavre		ZAO Finncolor	
Kemira Chemicals Inc.	100	United States, Savannah, GA	•	OOO Kraski Tikkurila	
Kemira Paper Chemicals Inc.	100	United States, Savannah, GA		Tikkurila Festék KFT	
Kemira Paper Chemicals Canada Inc.	100	Canada, Dorion, Que.		Imagica Ltd	
Kemira Chemicals Korea Corporation	100	South Korea, Ulsan		Spetra S.r.l.	
Kemira Chemicals Canada Inc.	100	Canada, Maitland, Ont.		A/S Baltic Color 2)	
Kemira Chemicals U.S. Inc.	100	United States, Philadelphia, PA		Tikkurila Baltcolor Sp. z	O.O. <sup>3)</sup>
Kemira Chemicals Canada NRO, Inc.	100	Canada, Maitland		Tikkurila Coatings Oy	
Kemira Chemicals Hungaria KFT	100	Hungary, Budapest		Kemira Coatings Ltd 5)	
AS Kemivesi	50	Estonia, Tallinn		Kemira Coatings (Irel	
Kemwater (Thailand) Ltd	49	Thailand, Bangkok		Northern Universal C	-
Kemira Pigments Oy	100	Finland, Pori		Industrial Coatings Ea	
Kemira Holdings Inc.	100	United States, Savannah, GA	•	Industrial Coatings No	
Kemira Pigments Inc.	100	United States, Savannah, GA		Industrial Coatings W	
Kemira Pigments AB	100	Sweden, Helsingborg		Southern Coatings an	
Kemira Pigments Kereskedelmi KFT	100	Hungary, Budapest		Universal Surface Coa	
Kemira Pigments Holding B.V.	100	The Netherlands, Rotterdam		Chiltern Surface Coat	ngs Ltd
Kemira Pigments B.V.	100	The Netherlands, Rozenburg		Dickursby Färg AB 3)	
Kemira Pigmente GmbH	100	Germany, Cologne		Tikkurila Ltd	
Kemira Services Holland B.V.	100	The Netherlands, Rotterdam		Becker Acroma Ltd <sup>2)</sup>	1 10 - 10
Kemira International Finance B.V.	100	The Netherlands, Rotterdam		Becker Acroma (Ire	land) Ltd 2)
Kemira Agro Rozenburg B.V.	100	The Netherlands, Europoort Rt		AS Tikkurila Coatings	
Kemira Agro Pernis B.V.	100	The Netherlands, Rotterdam		Tikkurila Coatings KFT	
Kemira Finance B.V.	100	The Netherlands, Rozenburg	•	ZAO Tikkurila Coatings	
Kemira Pigments S.A. 1)	100	Belgium, Wavre		Tikkurila Coatings Gmb	H
Kemira Pigments Asia Pacific Pte. Ltd.	100	Singapore		Tikkurila CPS Oy	
Kemira Pigments Latin America Comercial Lt	da. 100	Chile, Santiago		Winter-Bouts B.V.	

■ = production
 ■ Kemira Chemicals
 ■ Kemira Pigments
 ■ Kemira Agro
 □ = service
 ■ Tikkurila

Company

Other

olding Location Finland, Helsinki United Kingdom, Ince United Kingdom, Ince United Kingdom, Ince 100 Ireland, Dublin 100 Belgium, Wavre Belgium, Basècles 100 Belgium, France, Fresnes s/ Escaut 100 100 France, Ribécourt 100 The Netherlands, Vondelingenplaat Rt • The Netherlands, Vondelingenplaat Rt • 100 The Netherlands, Vondelingenplaat Rt • 100 The Netherlands, Maastricht 100 Germany, Hannover Spain, Valencia Finland, Mikkeli 100 Finland, Kiukainen 100 Finland, Muurla 100 Estonia, Tallinn Latvia, Riga 100 100 Russia, Moscow 100 Poland, Warsaw Malaysia, Kuala Lumpur 100 100 Hungary, Hódmezóvásárhely Estonia, Tallinn Lithuania, Vilnius Estonia, Tallinn 100 50 Italy, Bologna 100 Finland, Vantaa 100 Finland, Vantaa Estonia, Tallinn 50 Lithuania, Vilnius 100 Russia, St. Petersburg Russia, Moscow 100 100 Hungary, Budapest United Kingdom, Uxbridge 100 Italy, Modena 50 Latvia, Riga 60 Poland, Sczcecin 100 Finland, Vantaa United Kingdom, Bury 100 100 Ireland, Cork United Kingdom, Heywood 100 100 United Kingdom, Colchester United Kingdom, North Shields 100 United Kingdom, Bristol 75 United Kingdom, Sutton United Kingdom, Sutton-in-Ashfield 100 100 United Kingdom, Aylesbury 100 Sweden, Spånga United Kingdom, Haverhill 100 United Kingdom, Haverhill 50 Ireland, Bray Estonia, Tallinn 100 Hungary, Budapest 100 100 Russia, St. Petersburg Germany, Hanau 100 Finland, Vantaa

100

The Netherlands, Sittard

Group holding	Location

Kemira Color B.V. 7)	100	The Netherlands, Dordrecht	
Winter-Bouts GmbH	100	Germany, Hamburg	
Winter-Bouts South Africa (Pty) Ltd	100	South Africa, Edenvale	
Tikkurila Ltda	100	Brazil, São Paulo	
Tikkurila Pty Ltd	100	Australia, Wetherill Park	
Corob International AG	50	Switzerland, Aarau	
Corob Oy	50	Finland, Ulvila	
Corob Color Robots B.V.	50	Holland, Eindhoven	•
Corob S.p.A.	50	Italy, Modena	
Corob Scandinavia AB	50	Sweden, Gothenburg	
Corob CPS Service Systems Ltd	50	United Kingdom, Henley	
Corob Sudamericana S.A.	50	Uruguay, Montevideo	
Corob North America Inc.	50	United States, Charlotte, NC	
Corob Ltd	50	Hong Kong	
Matherson S.p.A.	100	Italy, Bergamo	
Tikkurila Inc.	100	United States, Philadelphia, PA	
Tikkurila CPS (SEA) Pte Ltd	100	Singapore	
Tikkurila Services Oy	100	Finland, Vantaa	
Kemira Engineering Oy 4)	100	Finland, Helsinki	
Kemira Metalkat Oy	100	Finland, Laukaa	
Metpela Oy	100	Finland, Laitila	
Convertitori Catalitici Europa S.r.l.	100	Italy, Genova	
Kemira Katalysatoren GmbH	100	Germany, Wiesbaden	
Kemira Safety Oy	100	Finland, Vaasa	
Kemira Safety Ltd	100	United Kingdom, Bromsgrove	
Kemira Danmark Holding A/S	100	Denmark, Fredericia	•
Kemira Danmark A/S	100	Denmark, Fredericia	
Kemira Miljö A/S	100	Denmark, Esbjerg	

<sup>1)</sup> Owned in equal shares by Kemira Pigments Oy and Kemira Pigments B.V.

Companies not operative in 1999 are excluded.

Ioint venture.

<sup>&</sup>lt;sup>3)</sup> Owned in equal shares by Tikkurila Coatings Oy and Tikkurila Paints Oy.

<sup>&</sup>lt;sup>4)</sup> Owned in equal shares by Kemira Chemicals Oy, Kemira Pigments Oy and Kemira Agro Oy.

<sup>&</sup>lt;sup>5)</sup> From 1 January 2000 Tikkurila Coatings Ltd

<sup>&</sup>lt;sup>6)</sup> From 1 January 2000 Tikkurila Coatings (Ireland) Ltd

<sup>7)</sup> From 1 January 2000 Tikkurila Coatings B.V.

# **ADDRESSES**

#### **FINLAND**

KEMIRA OYI

Porkkalankatu 3 P.O. Box 330 00101 Helsinki Tel. +358 10 8611 Fax +358 10 862 1119 www.kemira.com

KEMIRA CHEMICALS OY

Porkkalankatu 3 00101 Helsinki Tel. +358 10 861 211 Fax +358 10 862 1124

KEMIRA CHEMICALS OY

P.O. Box 20 71801 Siilinjärvi Tel. +358 10 861 215 Fax +358 10 862 6000

KEMIRA CHEMICAIS OY

P.O. Box 171 90101 Oulu Tel. +358 10 861 214 Fax +358 10 862 5000

KEMIRA CHEMICALS OY

Research Centre P.O. Box 171 90101 Oulu Tel. +358 10 861 214 Fax +358 10 862 5678

KEMIRA CHEMICALS OY

P.O. Box 74 67101 Kokkola Tel. +358 10 861 217 Fax +358 10862 8000

KEMIRA CHEMICALS OY

P.O. Box 500 65101 Vaasa Tel. +358 10 861 216 Fax +358 10 862 7000

KEMIRA CHEMICALS OY

29200 Harjavalta Tel. +358 10 861 517 Fax +358 10 862 4000

KEMIRA FINE CHEMICALS OY Porkkalankatu 3

P.O. Box 330 00101 Helsinki Tel. +358 10 861 219 Fax +358 10 862 1624

KEMWATER SERVICES OY

P.O. Box 330 00101 Helsinki Tel +358 10 861 211 Fax +358 10 862 1968

KEMIRA PIGMENTS OY

Porkkalankatu 3 P.O. Box 330 00101 Helsinki Tel. +358 10 861 414 Fax +358 10 862 1794

KEMIRA PIGMENTS OY

28840 Pori Tel.+358 2 628 1000 Fax +358 2 628 1149

KEMIRA AGRO OY

Porkkalankatu 3 P.O. Box 330 00101 Helsinki Tel. +358 10 861 511

KEMIRA AGRO OY

Espoo Research Centre Luoteisrinne 2 P.O. Box 44 02271 Espoo Tel. +358 10 861 516 Fax +358 10 862 2000

KEMIRA AGRO OY

P.O. Box 5 23501 Uusikaupunki Tel. +358 10 861 518 Fax +358 10 862 3000

KEMIRA AGRO OY

29200 Harjavalta Tel. +358 10 86 1517 Fax +358 10 86 24219

TIKKURILA OY

PO. Box 53, Kuninkaalantie 1 01301 Vantaa Tel. +358 9 857 721 Fax +358 9 8577 6900 www.tikkurila.fi

TIKKURILA PAINTS OY

P.O. Box 53, Kuninkaalantie 1 01301 Vantaa Tel. +358 9 857 731 Fax +358 9 8577 6902

TIKKURILA COATINGS OY

P.O. Box 53, Kuninkaalantie 1 01301 Vantaa Tel. +358 9 857 741 Fax +358 9 8577 6911

TIKKURILA CPS OY

P.O. Box 53, Kuninkaalantie 1 01301 Vantaa Tel. +358 9 857 751 Fax +358 9 8577 6904

TIKKURILA SERVICES OY

P.O. Box 53, Kuninkaalantie 1 01301 Vantaa Tel. +358 9 857 721 Fax +358 9 8577 6915

COROR OV

Sammontie 5 28400 Ulvila Tel. +358 2 677 7700 Fax +358 2 677 7701

KEMIRA ENGINEERING OY

Porkkalankatu 3 P.O. Box 330 00101 Helsinki Tel. +358 10 861 616 Fax +358 10 862 1127

KEMIRA METALKAT OY

P.O. Box 20 41331 Vihtavuori Puh. +358 10 861 1717 Fax +358 10 863 5000

KEMIRA SAFETY OY

P.O. Box 501 65101 Vaasa Tel. +358 10 861 811 Fax +358 10 863 6591

METPELA OY

Turuntie 41 23800 Laitila Tel. +358 2 85 731 Fax +358 2 856 305

VILIAVUUSPALVELU OY

Graanintie 7, P.O. Box 500 50101 Mikkeli Tel. +358 15 320 400 Fax +358 15 320 4050

A. JALANDER OY

Muurlantie 101 B 25130 Muurla Tel. +358 2 728 050 Fax +358 2 728 0520

MYKORA OY

27400 Kiukainen Tel. +358 2 8387 7000 Fax +358 2 8387 7011

AI GFRIA

KEMIRA ALGÉRIE, SPA

1, Rue Doudon Mokntar Ben Aknoum, Alger Tel. 999 213 2 912 100 Fax 999 213 2 912 069

**AUSTRALIA** 

TIKKURILA PTY LTD

PO. Box 7110 33-35 Redfern Street Wetherill Park, NSW 2164 Tel. +61 2 9604 8300 Fax +61 2 9604 8333

**AUSTRIA** 

KEMIRA CHEMIE GES.MBH

Mariahilfer Strasse 103 A-1060 Wien Tel. +43 1 597 3767 Fax +43 1 597 376 720

**BELGIUM** 

KEMIRA PIGMENTS S.A.

Avenue Einstein 11 B-1300 Wavre Tel. +32 10 232 700 Fax +32 10 229 892

KEMIRA S.A./N.V. Avenue Einstein 11 B-1300 Wavre Tel. +32 10 232 711 Fax +32 10 228 988 KEMIRA S.A./N.V.

P.O. Box 6 Rue de la Carbo B-7333 Tertre Tel. +32 65 712 211 Fax +32 65 641 917

BATTAILLE S.A.

Rue Octave Battaille, 192 B-7971 Basècles Tel. +32 69 778 521 Fax +32 69 771 347

KEMWATER BRASIL S.A.

Estrada Particular Eiji Kikuti, 397 Cooperativa São Bernardo do Campo - SP CEP 09852-040 Tel. +55 11 4392 4400 Fax +55 11 4392 4400

TIKKURILA LTDA

Rua Vieira de Morais, 1558 04617-005 - Campo Belo São Paulo - SP Tel. +55 11 5561 7122 Fax +55 11 543 0553

CANADA

KEMIRA CHEMICALS CANADA INC. 1380 County Rd. No 2, PO. Box 615 Canada KOE IPO Tel. +1 613 348 7711 Fax +1 613 348 7700

CHILE

KEMIRA PIGMENTS LATIN

REMIRA PIGMENTS LATIN AMERICA COMERCIAL LIMITADA Luis Thayer Ojeda 166 Of. 504 Providencia Santiago Tel. +56 2 234 0977 Fax +56 2 232 8587

CHINA

KEMWATER (YIXING) CO., LTD

Nanyue Village, China Yixing Industrial Park CN-214205 Yixing City Puh. +86 510 7062090/800 Fax +86 510 7063284

KEMIRA AGRO OY BEIJING REPRESENTATIVE OFFICE

REPRESENTATIVE OFFIC Room 802, Scite Tower No. 22, Jianguomenwai Ave 100004 Beijing Tel. +86 10 6512 3321 Fax +86 10 6512 3320

KEMIRA COMPOUND FERTILISER (ZHANJIANG) CO., LTD No, 11 Huguang Road

Zhanjiang 524012 Guangdong Tel. +86 759 221 2214 Fax +86 759 228 6207

COROB Ltd

Room 403, 4/E. Printing House 6 Duddell Street Central Hong Kong Tel. +852 2557 8108 Fax +852 2566 7160

TIKKURILA CPS OY

Representative Office No 93-7 of 2nd Quanyuan Rd. Dongling District 110015 Shenyang City Tel. 486 24 2423 0438 Fax +86 24 2323 7108

**CZECH REPUBLIC** 

KEMIFLOC A.S.

Nábr. Dr E Benese 24 CZ 75062 Prerov Tel. +420 641 253 032 Fax +420 641 253 033

KEMWATER PROCHEMIE s.r.o.

Úpravna vody Bradlec CZ-293 06 Kosmonosy Tel. +420 326 724 034 Fax +420 326 724 030

DENMARK

KEMIRA MILJØ A/S

Måde Industrivej 19 DK-6705 Esbjerg Tel. +45 7545 2555 Fax +45 7545 2575

KEMIRA DANMARK A/S

Kongensgade 107 Box 167 DK-7000 Fredericia Tel. +45 7922 3366 Fax +45 7922 3322

KEMIRA AGRO OY

(Copenhagen office) Dronningens Tvaergade 9, 3. fl. DK1302 Copenhagen Denmark Tel. +45 3336 0545 Fax +45 3336 0547

**ESTONIA** 

AS KEMIVESI

Filtri tee 9A EE-10132 Tallinn Tel. +372 601 4206 Fax +372 601 4203

KEMIRA AGRO EESTI AS

Merivälja tee 5 EE 11911 Tallinn Tel. +372 6 300 155 Fax +372 6 300 157

AS BALTIC COLOR

Liimi 5 10621 Tallinn Tel. +372 6 501 100 Fax +372 6 501 110

AS TIKKURILA COATINGS

Liimi 5 10621 Tallinn Tel. +372 6 598 950 Fax +372 6 598 951

**FRANCE** 

KEMIRA CHIMIE S.A.

Route de Mothern F-67630 Lauterbourg Tel. +33 38854 9850 Fax +33 38854 9851

KEMIRA CHIMIE S.A.

207, Rue de Bercy F-75012 Paris Tel. +33 1 4346 2260 Fax +33 1 4346 2269

KEMIRA ENGRAIS S.A.

Marché d'Intérêt National 80 F-84953 Cavaillon Cedex Tel. +33 9071 0333 Fax +33 9071 4567

**GERMANY** 

KEMIRA CHEMIE GMBH

Langstrasse 60 D-63450 Hanau Tel. +49 6181 92 470 Fax +49 6181 924 720

KEMIRA PIGMENTE GMBH

Langstrasse 60 D-63450 Hanau Tel. +49 6181 924728 Fax +49 6181 924730

KEMIRA DEUTSCHLAND GMBH

Postfach 51 07 20 D-30637 Hannover 51 Tel. +49 511 647 4620 Fax +49 511 647 4625

KEMIRA KATALYSATOREN

Friedrichstrasse 55 D-65185 Wiesbaden Tel. +49 611 992 420 Fax +49 611 992 4299

HUNGARY

KEMIRA PIGMENTS KFT.

REMIKA PIGMENT Bécsi út 25. H-1023 Budapest Hungary Tel. +36 1 346 7070 Fax +36 1 346 7072

KEMIRA AGRO HUNGARY LTD.

Vöröskereszt street 6 H-6800 Hódmezóvásárhely Tel. +36 62 245 404 Fax +36 62 242 183

TIKKURILA COATINGS KFT.

Ecseri út 14-16 H-1097 Budapest Tel. +36 1 280 8825 Fax +36 1 280 6739

TIKKURILA FESTÉK KET.

Gyáli út 27-29 H-1097 Budapest Tel. +36 1 280 8825 Fax +36 1 280 6739 KEMIRA CHEMACALS HUNGÁRIA KFT

Bécsi út 25 HU-1023 Budapest Tel. +36 1 346 70 75,-76 Fax +36 1 346 70 77

INDIA

COROB INDIA PVT. LTD.

Warden House, 1st Floor Sir P. M. Road, Fort Mumbai 400 001 Tel. +91 22 287 2295 Fax +91 22 287 3475

INDONESIA

KEMIRA CHEMICALS REPRESENTATIVE OFFICE

JI. Jatiwaringin Raya 54 Pondok Gede 17411 Jawa Barat Tel. +62 21 8499 0250 Fax +62 21 8499 0251

KEMIRA AGRO OY REPRESENTATIVE OFFICE

Mr Asul Amru JI. Jatiwaringin Raya 54 Pondok Gede 17411 Tel. +62 21 8499 5628 Fax +62 21 8499 5626

**IRELAND** 

TIKKURILA COATINGS (IRELAND) LTD

Unit B1, Marina Centrepoint Cork city Tel. +353 21 310 675 Fax +353 21 310 671

ITALY

KEMIRA CHIMICA S.p.A.

Via Rosellini 12 I-20124 Milano Tel. +39 02 693 3901 Fax +39 02 693 39050

BIOLCHIM S.p.A.

Via S. Carlo, 2130 40059 Medicina Bologna Tel. +39 051 850 150 Fax +39 051 852 884

COROB S.p.A.

Via Agricoltura, 103 41038 San Felice s/P Modena Tel. +39 0535 6630 Fax +39 0535 663 600

MATHERSON S.p.A. Via Olimpia, 2 24030 Presezzo

24050 FIGURE Bergamo Tel. +39 035 468 711 Fax +39 035 611 644

SPETRA S.r.L. Via Venezia, 14/A 41034 Finale Emilia Modena Tel. +39 0535 92 530 Fax +39 0535 93 400

CCE-CONVERTITORI CATALITICI EUROPA S.R.L.

Via Colano 9A/14D 16162 Genova (GE) Tel. +39 010 726 1653 Fax +39 010 726 1690

JAPAN

KEMIRA-UBE, LTD.

Ube Building 3-11, Higashi-shinagawa Shinagawa-ku Tokyo, 140 Tel. +81 3 5460 3365 Fax +81 3 5460 3442

KEMIRA-UBE, LTD.

Ube Plant 2575 Ohaza Fujimagari 25/3 Ollaza rujiling... Ube-City Yamaguchi Prefecture 755 Tel. +81 836 353 000 Fax +81 836 352 288

**KOREA** 

KEMIRA CHEMICALS KOREA CORPORATION

Kukje Building 13 th Floor 111, Da-dong, Choong-ku Seoul, 100-180 Korea Tel. +82 2 318 3770 Fax +82 2 318 3776

# KEMIRA CHEMICALS KOREA CORP., ULSAN PLANT

VISAN PLANT 482-3, Sangge-dong, Nam-ku 680-180 Ulsan Tel. +82 52 270 4000 Fax +82 52 270 4009

#### LATVIA

SIA KEMIRA AGRO LATVIJA

Dzirnavu iela 140 702.ist LV-1050 Riga Tel. +371 7 212 512 Fax +371 7 830 280

A/S BALTIC COLOR

Kruzes 3 Riga IV-1046 Tel. +371 7 611 131 Fax +371 7 617 531

#### LITHUANIA

UAB KEMIRA AGRO VILNIUS

Smelio 8 2055 Vilnius Tel. +370 2 709 175 Fax +370 2 709 770

HAR KEMIRA LIFOSA

Juodkiskio 50 LT-5030 Kedainiai Tel. +370 57 60111 Fax +370 57 60 424

UAB BALTIC COLOR

Sietyno g. 8 2050 Vilnius Tel. +370 2 706 413 Fax +370 2 706 414

#### **MALAYSIA**

KEMIRA SDN. BHD.

Level 12A, Lot 1202A Uptown 3 No.3, Jalan SS21/39 Damansara Uptown 47400 Petaling Jaya Selangor Darul Ehsan Malaysia Tel. +60 3 716 4181 Fax +60 3 712 2479

# KEMIRA-KUOK FERTILIZERS

SDN. BHD. 4th Floor, Kompleks Kemajuan No. 2 Jalan 19/1B. 46300 Petaling Jaya Selangor Darul Ehsan Tel. +60 3 757 7644 Fax +60 3 757 7670

#### MEXICO

KEMWATER DE MEXICO, S.A.

Carretera Xoxtla-Tlaltenango S/N 5/N San Miguel Analco MX-90729 Nativitas,Tlaxcala Tel. +52 1 2 281 5336 Fax +52 1 2 281 5366

# **NETHERLANDS**

KEMIRA CHEMICALS B.V.

P.O. Box 1015 NL-3180 AA Rozenburg Tel. +31 10 295 2540 Fax +31 295 2536

KEMWATER B.V.

P.O. Box 1015 NL-3180 AA Rozenburg Tel. +31 181 281 320 Fax +31 181 281 330

KEMAX B.V.

NEMAX B.V.
Oosterhorn 4
P.O. Bax 124
NL-9930 AC Delfzijl
Tel. +31 596 647 550
Fax +31 596 648 173

KEMIRA PIGMENTS B.V.

Prof. Gerbrandyweg 2 3197 KK Rotterdam P.O. Box 1013 NL-3180 AA Rozenburg Tel. +31 181 246600 Fax +31 181 213169

KEMIRA AGRO ROZENBURG B.V.

ROZENBURG B.V. Moezelweg 151 P.O. Box 6105 NL-3196 ZG Vondelingenplaat Rt. Tel. +31 10 295 2911 Fax +31 10 295 2374

KEMIRA AGRO PERNIS B.V.

Vondelingenplaat 17 P.O. Box 6105 P.O. Box 6105 NL-3196 ZG Vondelingenplaat Rt. Tel. +31 10 295 2911 Fax +31 10 295 2374

MULTIRANGE B.V.

P.O. Box 6105 NL-3196 ZG Vondelingenplaat Rt. Tel. +31 10 295 2911 Fax +31 10 295 2374

TIKKURILA COATINGS B.V.

P.O. Box 83 Mijlweg 65 NL-3300 AB Dordrecht Tel. +31 78 652 7599 Fax +31 78 651 0886

WINTER-BOUTS B.V.

P.O. Box 809 NL-6130 AV Sittard Nusterweg 98 NL-6136 KV Sittard Tel. +31 46 457 0100 Fax +31 46 457 0150

#### NORWAY

KEMIRA CHEMICALS AS

No. 1177 N-1631 Gamle Fredrikstad Tel. +47 69 358 585 Fax +47 69 358 595

KEMIRA CHEMICALS AS

Veritasvn. 1 N-1322 Høvik Tel. +47 67 565 870 Fax +47 67 565 888

#### **PHILIPPINES**

KEMWATER PHIL. CORP.

Chemphil Building, 851 Antonio Arnaiz Avenue, H4-1229 Makati City Tel. +63 2 818 8711 Fax +63 2 817 4851

#### POLAND

KEMIPOL LTD.

Tel. +48 91 317 3220 Fax +48 91 317 3120

KEMIRA AGRO

POLAND Sp. z o.o. ul. Migdazowa 4 02-796 Warszawa Tel. +48 22 645 1465 Fax +48 22 645 1721

TIKKURILA BALTCOLOR

Sp. z o.o. Ul. Ksiedza Kujota 16 70-605 Szczecin Tel. +48 91 462 4606 Fax +48 91 462 4343

## **PORTUGAL**

ALIADA QUIMICA DE PORTUGAL LTDA Quinta da Industria,

Beduido PT-3860 Estarreia Tel. +351 2 348 10 300 Fax +351 2 348 10 306

## **ROMANIA**

KEMWATER CRISTAL S.A.

Str. Muncii Nr 14 Fundulea Calarasi County Cod. 8264 Tel./Fax 40 42 317 141

# RUSSIA

ZAO KEMIRA AGRO

p. Koteljniki-1 Ljuberetskij rajon 140053, Moskovskaja oblastj Tel. +7 095 550 6478

ZAO FINNCOLOR

Pr. 9-go Yanvarya, d.15 192289 St. Peterburg Tel. +7 812 172 6348 Fax +7 812 172 6348

TIKKURILA COATINGS ZAO

Pr. 9-go Yanvarya, d.15 192289 St. Peterburg Tel. +7 812 101 4413 Fax +7 812 101 4413

#### **SINGAPORE**

KEMIRA PIGMENTS ASIA PACIFIC PTE. LTD.

10 Anson Road International Plaza #33-06A Singapore 079 903 Tel. +65 227 1757 Fax +65 227 1613

TIKKURILA CPS (SEA) PTE LTD No. 4,Tuas Link 1

Singapore 638591 Tel. +65 890 2600 Fax +65 890 2626

## **SOUTH AFRICA**

WINTER-BOUTS B.V.

P.O. Box 1659 1610 Edenvale 57 Brunton Circle Founders View South Edenvale Tel. +27 11 609 0118 Fax +27 11 609 0559

#### SPAIN

KEMIRA IBÉRICA, S.A.

Gran Via Corts Catalanes, 641 E-08010 Barcelona Tel. +34 93 412 3050 Fax +34-93 412 0884

COMERCIAL DE FERTILI-ZANTES LIQUIDOS S.A. Avda Alicante, 20 E-46460 Silla (Valencia) Tel. +34 6 121 05 40 Fax +34 6 120 04 58

#### **SWEDEN**

KEMIRA KEMI AB

Box 902 S-251 09 Helsingborg Tel. +46 42 171 000 Fax +46 42 140 635

ALUFLUOR AB

Box 902 S-251 09 Helsingborg Tel. +46 42 171 020 Fax +46 42 135 285

KEMWATER NÄRKE AR

Kvarntorp S-692 92 Kumla Tel. +46 19 585 700 Fax +46 19 585 710

KEMIRA PIGMENTS AB

Box 902 Industrigatan 83 S-251 09 Helsingborg Tel. +46 42 171 081 Fax +46 42 171 084

DICKURSBY FÄRG AR

Box 3014 Arrendevägen 36 S-163 03 Spånga Tel. +46 8 598 916 00 Fax +46 8 598 917 00

# THAILAND

KEMWATER (THAILAND) CO. LTD

Metro Building 180-184 Rajawongse Road Bangkok 10100 Tel. +66 2 622 6461 Fax +66 2 622 6460

KEMIRA THAI CO., LTD

Metro Building, 7th floor 180-184 Rajawongse Road Bangkok, 10100 Tel. +66 2 226 3871 Fax +66 2 224 5672

#### TURKEY

KEMWATER DIPER ENV. CHEMICALS A.S.

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#### UNITED KINGDOM

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Kemwater New Potter Grande Road MG2 Trading Estate Goole DN14 6BZ Tel. +44 1405 765 13: Fax +44 1405 765 14

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Chester CH2 4LB Tel. +44 151 357 2777 Fax +44 151 357 1755

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5 Ballygowan Road Hillsborough Co. Down BT26 6HX Tel. +44 1846 682 121 Fax +44 1846 683 189

TIKKURILA COATINGS LTD (Protective Coatins) Warth Mills, Radcliffe Road

Lancashire BL9 9NB Tel. +44 161 764 6017 Fax +44 161 764 6102

TIKKURILA COATINGS LTD (DEM Industrial)

(DEM Industrial) Kelvin Way West Bromwich West Midlands B70 7JZ Tel. +44 121 525 5665 Fax +44 121 553 2787

KEMIRA SAFETY LTD

Unit 14 B Harris Business Park Harris Business Park Hanbury Road Stoke Prior Bromsgrove B60 4EH Tel. +44 1527 579 990 Fax +44 1527 579 991

UAE

LINION KEMIRA PLANT

P.O. Box 16938, Jebel Ali Free Zone Dubai Tel. +971 4 815 139 Fax +971 4 815 399

**UNITED STATES** 

KEMIRA PAPER CHEMICALS,

P.O. Box 368 Savannah, GA 31402 Tel. +1 800 688 5992 Fax +1 912 652 1160

KEMIRA PIGMENTS INC.

P.O. Box 368 Savannah, GA 31402 Tel. +1 912 652 1000 Fax +1 912 652 1184

COROB NORTH AMERICA INC. 13315-G Carowinds Blvd. Charlotte, NC 28273 Tel. +1 704 588 8408 Fax +1 704 588 8471

TIKKURILA INC.

7600 State Road Philadelphia, PA 19136 Tel. +1 215 335 7331 Fax +1 215 335 7354

URUGUAY

COROB SUDAMERICANA S.A.

Cardal 3092 C.P. 11600 Montevideo Tel. +598 2 487 0732 Fax +598 2 487 0736