

Material Safety Data Sheet

Diethylaluminum iodide, 25 wt% solution in toluene

ACC# 43478

Section 1 - Chemical Product and Company Identification

MSDS Name: Diethylaluminum iodide, 25 wt% solution in toluene

Catalog Numbers: AC185470000, AC185470250, AC185471000, AC185478000

Synonyms: None.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
108-88-3	Toluene	75	203-625-9
2040-00-8	Aluminum, diethylido-	25	218-032-0

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid. Flash Point: 4 deg C.

Danger! Causes eye and skin burns. Pyrophoric. Spontaneously flammable in air. **Flammable liquid and vapor.** May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. May cause central nervous system depression.

Target Organs: Kidneys, central nervous system, liver, thyroid.

Potential Health Effects

Eye: Causes eye burns. May cause chemical conjunctivitis and corneal damage.

Skin: Causes skin burns. May cause cyanosis of the extremities. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.

Ingestion: May cause severe and permanent damage to the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause liver and kidney damage. May cause perforation of the digestive tract. The toxicological properties of this substance have not been fully investigated. Ingestion of large amounts may cause CNS depression. May cause systemic effects. Chronic ingestion of iodides during pregnancy has resulted in fetal death, severe goiter, and cretinoid appearance of the newborn.

Inhalation: May cause liver and kidney damage. Causes chemical burns to the respiratory tract. The toxicological properties of this substance have not been fully investigated. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause systemic effects. May cause burning sensation in the chest.

Chronic: May cause liver and kidney damage. Effects may be delayed. Chronic ingestion of iodides during pregnancy has resulted in fetal death, severe goiter, and cretinoid appearance of the newborn. Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms could include skin rash, running nose and headache.

Section 4 - First Aid Measures

Eyes: Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: Evacuate area and fight fire from a safe distance. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. May burn with invisible flame. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Spontaneously ignitable in air. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Use dry sand or earth to smother fire. For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire. Do NOT use straight streams of water. Contact professional fire-fighters immediately. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: 4 deg C (39.20 deg F)
Autoignition Temperature: Not available.
Explosion Limits, Lower:Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 3; Flammability: 3; Instability: 2

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Isolate area and deny entry. Provide ventilation. Place under an inert atmosphere. Do not use combustible materials such as paper towels to clean up spill. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Handle under an inert atmosphere. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not expose to air. Store under an inert atmosphere.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Toluene	50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	100 ppm TWA; 375 mg/m ³ TWA 500 ppm IDLH	200 ppm TWA; 300 ppm Ceiling
Aluminum, diethylido-	2 mg/m ³ TWA (as Al) (listed under Aluminum, soluble salts).	2 mg/m ³ TWA (as Al) (listed under Aluminum, soluble salts).	none listed

OSHA Vacated PELs: Toluene: 100 ppm TWA; 375 mg/m³ TWA Aluminum, diethylido- : No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: colorless

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: 7.31

Evaporation Rate:Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point:0 deg C

Decomposition Temperature:Not available.

Solubility: Not available.

Specific Gravity/Density:.8600g/cm³

Molecular Formula:C₄H₁₀OAlI

Molecular Weight:212.01

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Powder or liquid is pyrophoric.

Conditions to Avoid: Incompatible materials, ignition sources, dust generation, exposure to air, excess heat, strong oxidants.

Incompatibilities with Other Materials: Acids, alcohols, bases, oxygen, water.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 108-88-3: XS5250000

CAS# 2040-00-8 unlisted.

LD50/LC50:

CAS# 108-88-3:

Draize test, rabbit, eye: 870 ug Mild;
Draize test, rabbit, eye: 2 mg/24H Severe;
Draize test, rabbit, skin: 435 mg Mild;
Draize test, rabbit, skin: 500 mg Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Inhalation, mouse: LC50 = 400 ppm/24H;
Inhalation, mouse: LC50 = 30000 mg/m3/2H;
Inhalation, mouse: LC50 = 19900 mg/m3/7H;
Inhalation, mouse: LC50 = 10000 mg/m3;
Inhalation, rat: LC50 = 49 gm/m3/4H;
Oral, rat: LD50 = 636 mg/kg;
Skin, rabbit: LD50 = 14100

CAS# 2040-00-8:

Carcinogenicity:

CAS# 108-88-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 2040-00-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 108-88-3: waste number U220.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ALUMINUM ALKYL HALIDES	No information available.
Hazard Class:	4.2	
UN Number:	UN3052	
Packing Group:	I	

Section 15 - Regulatory Information

US FEDERAL**TSCA**

CAS# 108-88-3 is listed on the TSCA inventory.

CAS# 2040-00-8 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 108-88-3: Effective 10/4/82, Sunset 10/4/92

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 108-88-3: 1000 lb final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 108-88-3: immediate, fire.

Section 313

This material contains Toluene (CAS# 108-88-3, 75%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 108-88-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 108-88-3 is listed as a Hazardous Substance under the CWA. CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 108-88-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 2040-00-8 can be found on the following state right to know lists: California, (listed as Aluminum, soluble salts), Pennsylvania, (listed as Aluminum, soluble salts), Minnesota, (listed as Aluminum, soluble salts).

California Prop 65

WARNING: This product contains Toluene, a chemical known to the state of California to cause developmental reproductive toxicity. California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F

Risk Phrases:

R 11 Highly flammable.

R 14/15 Reacts violently with water liberating extremely flammable gases.

R 6 Explosive with or without contact with air.

R 20 Harmful by inhalation.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 25 Avoid contact with eyes.

S 29 Do not empty into drains.

S 33 Take precautionary measures against static discharges.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 9 Keep container in a well-ventilated place.

S 28A After contact with skin, wash immediately with plenty of water

WGK (Water Danger/Protection)

CAS# 108-88-3: 2

CAS# 2040-00-8: No information available.

Canada - DSL/NDSL

CAS# 108-88-3 is listed on Canada's DSL List.

CAS# 2040-00-8 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, E, B6.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 108-88-3 is listed on the Canadian Ingredient Disclosure List.

CAS# 2040-00-8 (listed as Aluminum, soluble salts) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/28/1999

Revision #6 Date: 3/22/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.