



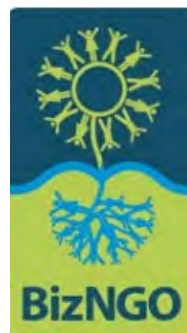
RETAILER'S GUIDE TO SAFER CHEMICALS & MATERIALS GETTING STARTED & BEYOND

NOVEMBER 2020 / BEVERLEY THORPE, CHERI PEELE, & MARK S. ROSSI



WHO WE ARE

Clean Production Action is a nonprofit dedicated to designing and delivering strategic solutions for green chemicals, sustainable materials, and environmentally preferable products. Our tools simplify the complexity of reducing the chemical footprint of products and supply chains. Our collaborations provide effective platforms for practitioners and thought leaders to work together in advancing safer chemicals and healthy materials. Business, environmental, investment, government, and academic leaders use GreenScreen® for Safer Chemicals and the Chemical Footprint Project Survey, and engage in our BizNGO groups and Investor Environmental Health Network, to create a safer and healthier tomorrow for people and the planet.



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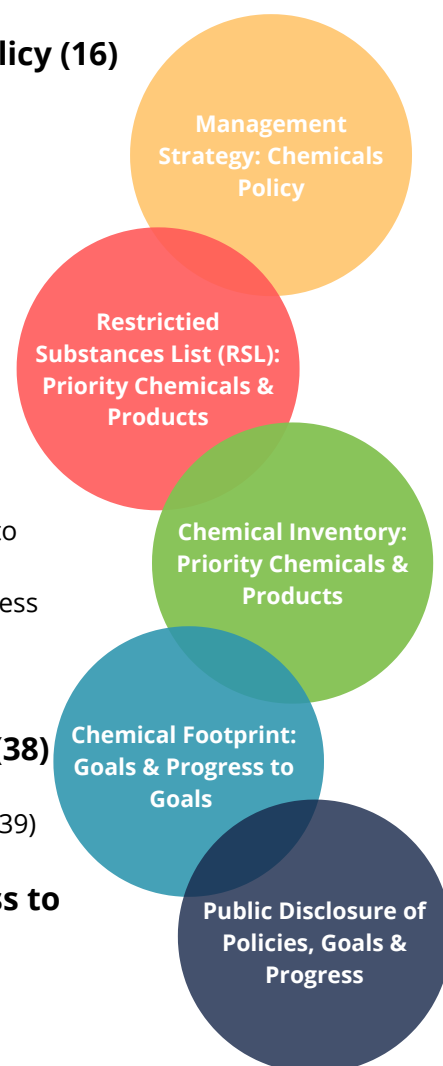
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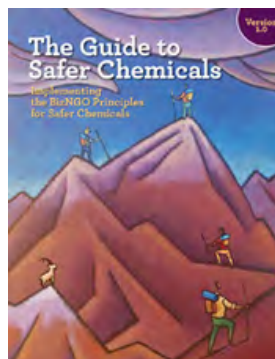
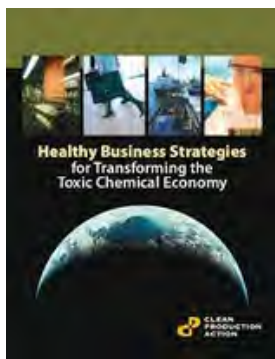


INTRODUCTION

Sitting at the interface between consumers and brands, retailers are in the unique position to integrate sustainability features into the products they place on their physical and virtual shelves – but knowing how to do this may seem overwhelming. This is a how-to guide for retailers that want both to address consumer concerns with hazardous chemicals in products and meet consumer preferences for products made with the safest and healthiest chemicals and materials.

This Retailer's Guide is for those who are starting, or already on the journey to chemicals management beyond legal requirements. Retailers are often caught by surprise and need to react quickly to customer concerns, campaigns from environmental groups, and new chemical regulations but knowing what actions to take can be challenging. The Guide lays out the rationale for moving beyond regulatory compliance to safer chemicals in retail through five modules.

The Retailer's Guide builds from Clean Production Action's more than 15 years of experience in working with companies and non-governmental organizations (NGOs) in documenting best and better practices in chemicals management. Our [Healthy Business Strategies report](#) (2006), the BizNGO [Guide to Safer Chemicals](#) (2012), and [The Business Case for Knowing Chemicals in Products and Supply Chains](#) (written for the United Nations Environment Programme) all documented how companies are achieving positive business results through good chemicals management in a range of sectors, including apparel, electronics, building, and retail.



Our research findings and discussions within our BizNGO working groups reveal that chemicals management is a journey, with many steps to be taken and lessons to be learned along the way. Both The Guide to Safer Chemicals and the Chemical Footprint Project Survey recognize the importance and challenges of taking the first steps beyond regulatory compliance.

Retailers are joining the [Chemical Footprint Project](#) and [BizNGO](#) to learn how to assess and improve the chemicals management practices of their suppliers as well as those of their own organizations. We welcome retailer participation in the Chemical Footprint Project and BizNGO and value feedback from all interested parties on how to improve this Guide and related resources to support all organizations in their journeys to safer and healthier chemicals. Retailers that implement a comprehensive chemicals management program can meet customer demands for avoiding hazardous chemicals and using safer alternatives in products and supply chains and anticipate regulatory pressures to do so. The CFP Survey gathers data on best practices in corporate chemicals management and is a useful foundation for this Guide.

1. WHY SHOULD RETAILERS TAKE ACTION ON CHEMICALS OF HIGH CONCERN? Because weak regulations, health impacts, consumer trends and investor focus on chemicals are all business risks

Chemicals are the building blocks of materials and products. A cleaning product, an article of clothing, and a piece of furniture are all comprised of chemicals. Some chemicals are inherently hazardous to human health or the environment, such as lead, Bisphenol A (BPA), and formaldehyde. These chemicals may play a needed function but have unintended consequences by leaking out into the environment and posing threats to human health wildlife and the natural world.



For investors, hazardous chemicals represent 'the new carbon.'

BANK SAFRA SARASIN LTD.

Other chemicals, such as water, or H₂O, a substance we drink and bathe in every day, are inherently safer for people and the planet. But for retailers the question and challenge is, how can they move proactively to ensure that their private label products and brand products avoid hazardous chemicals? How can they stay ahead of new concerns with chemicals?

a. Weak regulations amplify the business risk of selling products containing hazardous chemicals and undermined the need for retailers to move beyond legal compliance.

Retailers spend resources on being in legal compliance but this does not provide insurance against the business risk of selling products containing hazardous chemicals, because most hazardous chemicals are unregulated. In fact, of the more than 80,000 known chemicals widely used in commerce, few have even been adequately tested for human health and environmental impacts due to the historical legacy of allowing chemicals to be put on the market with little to no data requirements. This has resulted in international regulatory efforts to fill these data gaps and then pass

regulations to restrict the use of hazardous chemicals, but the regulatory 'catch up' process is slow with a lagging review process. However, many chemicals can be classified as chemicals of high concern because of their presence on authoritative chemical hazard lists. These lists and databases keep abreast of new scientific understanding of chemical hazards. Therefore retailers can move beyond legal compliance by identifying chemicals of high concern in products and packaging and work with suppliers to restrict them.

Chemicals of high concern (CoHC) pose serious threats to human health and the environment. Clean Production Action defines a CoHC as a chemical or substance:

- that is carcinogenic, mutagenic, or toxic to reproduction (CMR); or
- that is persistent in the environment, bioaccumulative, and toxic (PBT); or
- that causes any other adverse effect for which there is scientific evidence of probable serious effects to human health or the environment that give rise to an equivalent level of concern (for example, an endocrine disruptor or neurotoxicant); or
- whose breakdown products result in chemicals or substances that meet any of the above criteria.

This definition aligns with the Globally Harmonized System for Chemicals and the European Union's definition of a Substance of Very High Concern. Chemicals with the above characteristics of a CoHC are commonly found in consumer products and manufacturing processes, requiring retailers to move beyond regulatory compliance for a variety of reasons:

- The regulatory process to restrict chemicals is slow, even in the face of new scientific information, and it has a lagging review process with ongoing challenges of confidential business claims for access to data on many chemicals.
- Even when a chemical is shown to have high hazard, it may only be restricted in certain uses. For example some regulations have restricted the use of BPA in baby bottles but still allow its use in cashier receipts and can linings, even though the same degree of hazard remains with different exposure routes.

- Not knowing about the extent of hazardous chemicals in products is a business risk for retailers. NGO campaigns routinely test products for hazardous chemical ingredients to alert the public and shareholders, such as PFAS in microwaveable popcorn bags, phthalates in macaroni and cheese fast food, formaldehyde in flooring, or heavy metals and PVC in a range of retail products.
- Markets are continually shifting and moving beyond regulatory compliance. For example, BPA-free water bottles are in demand due to scientific evidence of BPA health impacts and consumer awareness. In 2011, SIGG Switzerland's distributor in the U.S. filed for bankruptcy with \$13 million in liabilities [after failing to disclose the presence of Bisphenol A in its aluminum water bottles](#).
- [In 2013, Walmart paid \\$81.6 million in fines](#) for the mishandling of products sold in its stores that became damaged or were returned, thus becoming hazardous waste. This was a factor in prompting the retailer to develop a chemical management plan beyond legal compliance.

Americans are exposed to a toxic soup of more than 80,000 different chemicals, but we have no idea what the impact of those chemicals is on our bodies — or those of our children.

Current law has failed to protect Americans and Congress can't afford to stand on the sidelines any longer.

SEN. TOM UDALL, MARCH 10, 2015
SPEAKING OF THE NEED FOR TOXICS
SUBSTANCES CONTROL ACT REFORM.

- The production and use of hazardous chemicals continues to generate lawsuits and drop in stock value. For example, [DuPont and 3M](#) face ongoing legal suits from PFAS contamination; [Johnson & Johnson](#) for the presence of asbestos in talc products and [Bayer](#) for herbicides causing cancer and crop damage. Retailers who stock products containing these and other chemicals of concern are under [increasing pressure to remove them](#) and find safer substitutes.

b. Hazardous chemicals cause long term and serious health impacts - and are found in consumer products.

Common household products can be a key source of exposure to harmful chemicals through direct contact, ingestion and/or through the surrounding environment such as household dust or air. [The Global Chemicals Outlook report](#) stated that for many people in higher-income countries (and some in middle - and lower-income countries) the most significant exposures to hazardous chemicals may come from consumer products. This report notes that, "Since the frequency of consumer contact with products and the exposure duration are often high, these exposures can result in significant chemical concentrations in human bodies, especially during pregnancy" (pg. 123).

In addition the most common sources of indoor air contaminants in high consuming societies are building materials, household furnishings, and products. Products such as perfumes, hairsprays, air fresheners, furniture polish, cleaning solvents, hobby and craft supplies, pesticides, glues, adhesives, sealants, and carpet and fabric dyes and fibers are all likely contributors.

However it is not just product exposure that impacts health in high consuming

For many people...the most significant exposures to hazardous chemicals may come from consumer products.

Since the frequency of consumer contact with products and the exposure duration are often high, these exposures can result in significant chemical concentrations in human bodies, especially during pregnancy.

PG. 123. UN GLOBAL CHEMICALS OUTLOOK 2019.

economies. Hazardous chemicals released into communities compound the problem. In the United States, [almost 124 million people \(39% of the U.S. population\) live within 3 miles of one of about 12,500 hazardous facilities](#) according to the US EPA. These high-risk industrial and commercial facilities use or store very hazardous chemicals resulting in air and water contamination of nearby communities which are predominantly low-income communities of color, causing disproportionate exposure to these already vulnerable populations. [Dollar Stores are prevalent in communities near high risk chemical facilities](#), and hazardous chemicals in products sold by these retailers further compound residents' exposures.

Dollar Stores are prevalent in communities near high risk chemical facilities and hazardous chemicals in products sold by these retailers will further compound residents' exposures.

Hazardous chemicals that injure the developing brain are among the known causes for a rise in neurodevelopmental disabilities, including autism, attention-deficit hyperactivity disorder, and dyslexia.

Exposure to hazardous chemicals in the womb and during childhood is particularly worrying because of their impacts on a child's physical and mental development. Hazardous chemicals that injure the developing brain are [among the known causes for a rise in neurodevelopmental disabilities](#) including autism, attention-deficit hyperactivity disorder, and dyslexia. These health impacts affect millions of children worldwide. Decades of research show [hormone disrupting chemicals – many found in consumer products – are associated with a 50% fall in sperm counts](#) in men, increased miscarriages in women, and a rise in obesity and weakened immune systems. They are also associated with [hormone-dependent cancers such as prostate, uterine, thyroid, and breast cancer](#).

Attention to chemicals in products and supply chains is a key factor in any sustainability road-map due to the immediate and long term impact hazardous chemicals are having on the health of people and our environment, all of which is [exacerbated by climate change](#). For example, higher temperatures can allow certain chemicals to vaporize more easily and enter the air, plus encourage the breakdown of some chemicals into toxic byproducts. This is notwithstanding the risks to communities from [more intensive hurricanes and flooding](#) in regions with a high density of chemical manufacturing plants and refineries, such as [Cancer Alley](#).

Attention to chemical hazards in retailer operations is crucial. Not knowing the extent of hazardous chemicals sold in products can be a large financial and reputational risk but companies can be proactive by adopting a management strategy that goes beyond regulatory compliance. The good news is that company leaders are using available tools, strategies, and collaborations to identify hazardous chemicals in product sectors and work with suppliers to adopt safer substitutes.

Learn more about the health [effects of hazardous chemicals](#), [read factsheets on commonly used chemicals](#) and search hazard profiles of thousands of substances in the free [chemhat database](#), and [toxnot.com](#).



c. Increasing demand by consumers for safer chemicals and sustainable products.

Toxic chemicals in products and supply chains are hidden liabilities, posing potentially significant regulatory and reputational risks to brands.

Investors increasingly have little patience for companies that ignore the science, policy and consumer concerns with hazardous chemicals.

LAUREN COMPERE, [BOSTON COMMON ASSET MANAGEMENT](#)

Between 2013 and 2018, sustainability-marketed products were responsible for more than half of the growth in consumer packaged goods (CPGs) in that period despite the fact such goods account for just under 17 percent of the market. The 2019 study conducted by [NYU Stern Center for Sustainable Business](#) noted that these results reinforce the idea that embracing sustainability leads to better business results.

In December 2019, [First Insight](#) surveyed consumers in the U.S. on how sustainable practices are impacting shopping and purchase decisions. The results point to the growing expectation for sustainable models, with Generation Z making more shopping decisions based on sustainable retail practices than even Millennials and Generation X. The majority of Generation Z (54 percent) state that they are willing to spend an incremental 10 percent or more on sustainable products, with 50 percent of Millennials saying the same. It appears that with every generation, the quest for sustainability strengthens. Consumer demands for transparency of chemical ingredients in products continue to grow and are reflected in

growing regulatory requirements around chemical transparency. State legislatures have responded to public demand for greater chemical transparency by enacting laws that establish disclosure or reporting requirements. For example, the States of California and New York, Maine, New York, Oregon, Vermont, and Washington require public disclosure of priority chemicals in products. Companies and trade associations have created voluntary initiatives to address the pressure they experience from their customers and from environmental and public health advocates.

Retailers who require chemical disclosure from suppliers mitigate their own business risk. It also helps retailers respond to investors' questions about how they are avoiding hazardous chemicals in products that go beyond regulatory requirements.

In addition, the [Mind the Store](#) retailer campaign and annual report card that benchmarks retailers on their efforts to phase out toxic chemicals, is a growing influence with consumers. The report card mobilizes consumers to send emails and messages to retailers on social media urging them to act.

In an environment with increasing chemical regulation and market demand for safer chemicals, investors require clear, comparable information to assess company strategies for evaluating progress toward the use of safer chemicals.

CAROLINE BODEN, [MERCY INVESTMENT SERVICES](#)

d. Investors are including chemical risk in the materiality of retailers.

Investors are paying increasing attention to environmental, social, and governance (ESG) issues because they matter to financial performance. Changing social expectations mean that what is material for an industry will change.

In June 15, 2020 Trillium Asset Management and First Affirmative Financial Network filed a shareholder proposal asking the retailer TJX to issue a report describing if and how it plans to reduce its chemical footprint. First time shareholder proposals often receive support levels in the single digits, as investors need time to evaluate the issues addressed, but over 44% of the retailer’s shareholders voted for action to reduce chemical risk. This increasing scrutiny of investors to include chemical risk in the materiality of retailers is particularly well detailed by the Sustainable Accounting Board Standards (SASB) for retailers.

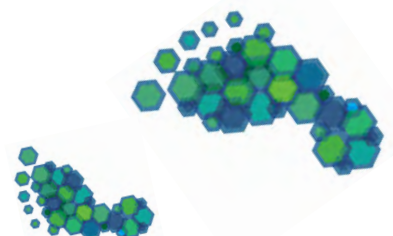
[SASB standards](#) are designed to sustainability issues most operating performance the typical company sector. [SASB’s Investor SASB Alliance](#) include and asset managers who improving the quality and sustainability-related The SASB Investor Advisory above fifty members including Lynch, Calvert, Domini, Franklin Sachs and Morgan Stanley Investment Management.



identify a minimum set of likely to impact the or financial condition of within an industry [Advisory Group](#) and leading asset owners are committed to comparability of disclosure to investors. Group members total Bank of America, Merrill Templeton, Fidelity, Goldman

SASB lays out a particularly detailed set of questions on chemicals management for [The Multiline and Specialty Retailers & Distributors](#) sector because they consider this of growing importance to the materiality of retailers. SASB asks retailers to ‘describe how it prioritizes chemicals for reduction and/or elimination from products it offers for sale, how it communicates these priorities to suppliers and enforces compliance, and whether it encourages or requires suppliers to consider alternative chemicals in product formulations.’

On June 15, 2020, a near majority (44%) of shareholders [voted in support of TJX Companies, Inc. issuing a report describing if and how it plans to reduce its chemical footprint.](#)



The following chart shows the parallels between the SASB questions on chemicals management for retailers and the Chemical Footprint Project Survey, on which this Retailers Guide is structured.

SASB STANDARD FOR RETAILERS:

Requirements for Accounting Metric: Assess and manage risks and/or hazards associated with chemicals in products”

1. Discuss the business and operational processes employed to assess and manage potential risks and hazards associated with materials, chemicals, and substances in products offered for sale

2. Describe whether approach to chemicals management is characterized by a hazard-based, risk-based, or other approach

3. Discuss the operational processes employed for chemicals management (for example, use of restricted substances lists — RSLs)

4. Describe how chemicals for reduction/elimination from products offered for sale are prioritized, how the priorities are communicated to suppliers and compliance is enforced, and whether suppliers are encouraged/required to consider alternative chemicals in products

5. Describe policies and practices for disclosing full chemical formulations for the products offered for sale

6. Disclose if testing and/or third-party certification to verify chemical content is pursued

7. Optional: list chemicals the business has found in products for which it has a policy to reduce, eliminate, or assess

CHEMICAL FOOTPRINT PROJECT SURVEY (CFP):

CFP Survey Questions & Response Options Relevant to SASB Accounting Metrics

The 4 pillars of the CFP Survey specify a holistic chemicals management framework. Responses to Management Strategy pillar questions (M1, M2, M3, and M4) are relevant to SASB metric #1

The CFP Survey is a hazard based framework of chemicals management

Responses to the Chemical Inventory pillar (6 questions) address SASB metric #3

Responses to the Footprint Measurement pillar (5 questions) along with the supplier questions in Chemical Inventory (I3 and I6) address SASB metric #4

Responses to M1 in Management Strategy and D1 in the Disclosure & Verification pillar address SASB metric #5

Responses to I6 in Chemical Inventory address the scope of activities companies take to verify chemical content.

CFP list of CoHC includes over 2,200 chemicals. Responses to I3 in Chemical Inventory address whether companies have a “Watch List” of chemicals beyond RSLs.

2. The Chemical Footprint Project (CFP) can help retailers with steps to best practice



This Retailer's Guide is modeled on the [Chemicals Footprint Project \(CFP\)](#) which outlines a systems approach to comprehensive chemicals management.

Based on input from leading brands and retailers, the CFP defines essential elements of good chemicals management into the four pillars of: Management Strategy, Chemical Inventory, Footprint Measurement, and Disclosure and Verification – all of which are reflected in the five modules within this Retailer's Guide.

CFP has created two metrics: (1) [the CFP Survey](#) score, which evaluates overall corporate chemicals management systems and, (2) [a chemical footprint](#), which measures CoHCs used in the products a company produces or sells. CFP draws from the Carbon Disclosure Project and introduces chemical footprinting to the family of sustainability metrics that includes carbon, water and waste footprints.

The goal of chemical footprinting is to evaluate the presence of hazardous chemicals in products, manufacturing processes, supply chains, and/or packaging and work toward eliminating their use or substituting with safer alternatives.

The CFP Survey encourages a systems approach to chemicals management by providing a means for a company to assess:

- the scope of its chemicals management policy;
- a process for prioritizing and reducing CoHCs, and working with suppliers to choose safer alternatives;
- the information it collects from suppliers; and
- what information it discloses to customers.

Signatories to the Chemical Footprint Project (CFP) now include investors, retailers, health care organizations, governments, and NGOs. These organizations represent over \$2.8 trillion in assets under management and purchasing power that are asking companies to respond to the CFP survey.

To participate in the Survey, companies submit their responses along with documentation that is protected by data security for confidentiality to Clean Production Action for scoring. The scores companies receive provide a metric for evaluating overall chemicals management programs, charting progress over time, and benchmarking to peers. Responders can opt to make their responses and/or score public. The 2019 annual CFP report highlighted ten disclosure leaders who publicly released their responses and score.

We urge retailers to become Signatories to the CFP to encourage their supplier to take the Survey. In addition, retailers can participate as Responders. This Retailer's Guide provides many resources that will help retailers participate either as a signatory or as a responder, in addition to the guidance provided by the CFP.

a. Become a CFP Signatory.

Retailers can become a CFP Signatory and encourage their suppliers to take part in the CFP Survey. Signatories to the CFP are organizations such as investors, retailers, and large-scale purchasers like health care systems, that are interested in responses provided by companies to the CFP Survey. For many companies, investors, and purchasers there was no common platform to access leadership in chemicals management. That is why the CFP was established and why organizations are registering to become Signatories.

CFP currently has investors as signatories with a combined \$2.8 trillion in assets under management. CFP's retailers and large scale purchaser signatories have a combined \$600 billion in purchasing power and include CVS Health, Staples, and

In 2016, we became the first major pharmacy chain in the country to become a signatory of the Chemical Footprint Project.

CVS HEALTH

Walmart. The data from the CFP Survey, especially as the data set grows over time, will enable Signatories to benchmark companies and identify leaders. Signatories agree to have their names listed on the CFP website and to encourage companies in their sphere of influence to participate in the CFP Survey.

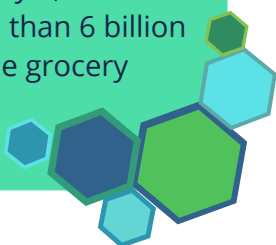
To become a Signatory to the Chemical Footprint Project, register at <https://www.chemicalfootprint.org/value>.

b. Become a CFP Responder.

Retailers can also become a Responder by participating in the CFP Survey. The CFP Survey provides a common language for companies to talk about their chemicals management. Responders to the CFP Survey are finding it valuable as a self-assessment tool, where they can measure their own progress internally and report externally to investors and business customers. The Survey also enables responders to determine whether their own practices are aligned with best practices identified across sectors.



Beginning in 2020, Ahold Delhaize USA and its companies will participate in The Chemical Footprint Project, reporting annually on progress toward the commitment. Considered together, the companies of Ahold Delhaize USA comprise the largest grocery retail group on the East Coast and the fourth largest group in the nation, with nearly 2,000 retail stores and more than 6 billion annualized online grocery orders.



Retailers have several options in responding to the CFP Survey. Retailers that manufacture private label products may choose to respond only relative to those products, from the perspective of a manufacturer or brand. Alternately, retailers may choose to respond relative to the third party brands they sell, from the perspective as a retailer of those brands. In either case, the retailer may choose to respond based on a subset of either its private label products or the third party brands it sells.

Responders to the CFP Survey may choose to publicly disclose any combination of their participation, their responses, and their score, or they may choose to remain anonymous.

It is noteworthy that the Mind the Store retailer report card questions and the campaign awards points to retailers who take part in the CFP. Because the Guide is aligned with the CFP framework, following the recommendations in the Guide will help retailers boost their score in the annual Mind the Store retailer report card ranking.

To become a responder to the Chemical Footprint Project Survey, register at <https://www.chemicalfootprint.org/assess/assessment-tool>

3. HOW TO USE THIS GUIDE

This Guide includes 5 Modules that outline steps that retailers can take when first starting to develop a chemicals management program as well as activities that can be taken for continuous improvement toward a comprehensive management system.

There are many pathways to getting started on chemicals management beyond regulatory compliance. Each retailer will choose an approach that is appropriate to its organization. Some retailers begin by developing a chemicals policy while others begin by conducting an internal assessment,

communicating with their supply chain and then developing and making public a chemicals policy. Because chemicals management is complex, most activities are iterative and will be developed and improved upon over time.

There is no set order to completing the steps, though some clearly build on the success of others. We suggest you review them all, and then develop a plan that fits with your company's culture and situation.



Within each module you will find:

- ✓ checklist of actions for chemicals management that builds from and aligns with the CFP
- ✓ Survey, examples of retailer actions
- ✓ resources and other practical information

The Retailer's Guide will be reviewed and updated periodically as an online resource. We invite retailers to [contact us](#) for feedback on the Guide as well as new content on their progress to safer chemicals adoption.

MODULE 1

Management Strategy: Chemicals Policy

Many companies are establishing environmental, social and governance (ESG) commitments but attention to chemicals in products and supply chains is often inadequately integrated into overall management systems.

Retailers can establish an organizational chemicals policy, engage external stakeholders, integrate chemicals safety into business strategy, provide incentives for implementing the chemicals policy, and require senior management engagement.

Important initial steps for retailers in developing a proactive chemicals management strategy are to:

- a) learn from external stakeholders;
- b) establish a chemicals policy; and
- c) implement and communicate the chemicals policy

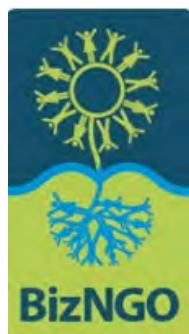
a. Learn from external stakeholders.

In starting the journey to safer chemicals retailers have the opportunity to tap into a diverse community of stakeholders to inform their decisions. NGOs, trade associations, informal collaborations, consultants, and investors bring rich and varied experiences, knowledge, and resources to creating a proactive chemicals management strategy.

Retailers can engage with various multi-stakeholder collaborations, such as:

[The Beauty and Personal Care Sustainability Project \(BPC\)](#): a pre-competitive collaboration of stakeholders across the industry value chain with the aim to increase the number of sustainable beauty and personal care products on retailers' shelves. It has released a points system for retailers to use with brands. The non-profit, Forum for the Future is the co-host organization for BPC alongside The Sustainability Consortium (TSC). The rating system for products, completed in early 2018, is managed by TSC.





[BizNGO](#): a project of Clean Production Action, convenes downstream users of chemicals (brands and retailers), NGOs, and governments in three multi-stakeholder work groups on chemicals management, chemical hazard assessment, and public policy. BizNGO also hosts an annual meeting for meaningful, in-depth, and open discussions. BizNGO participants co-develop principles, policies, strategies, and technical resources such as The Guide to Safer Chemicals and Chemicals Policy Template for Brands and Manufacturers.

[Green Chemistry & Commerce Council](#): GC3 is a multi-stakeholder collaborative that drives the commercial adoption of green chemistry by catalyzing and guiding action across all industries, sectors and supply chains. Its members include both downstream users and chemical producers. It provides an open forum for member businesses to share innovations in green chemistry and to work together to scale up and commercialize these solutions. The GC3 Retailer Leadership Council (RLC) promotes safer chemicals, materials, and products across retail supply and value chains. RLC members include: Amazon, Best Buy, CVS Health, Home Depot, Kingfisher, Lowe's, Meijer, Sephora, Staples, Target, TJX and Walmart. In addition, the GC3 Retailer Database provides information on tools and resources for safer chemistry.



"Lowe's has been working with trusted partners, such as the Green Chemistry and Commerce Council (GC3) to continuously support green chemistry initiatives as well as participating in the Retail Leadership Council of the GC3 to better align the retail sector. Lowe's will also continue to partner with credible NGOs, associations and industry partners."



[Mind the Store](#): The Mind the Store campaign is a collaboration of NGOs challenging retailers to eliminate toxic chemicals in products and packaging and develop comprehensive safer chemicals policies. The campaign raises the voices of thousands of consumers, publishes new scientific research, and engages companies in dialogue and sharing policy recommendations. The annual Retailer Report Card ranks retailers against a comprehensive scoring rubric of 13 criteria. These criteria align with other corporate safer chemicals policies and best practices identified in the BizNGO Principles for Safer Chemicals, BizNGO Guide to Safer Chemicals, and the Chemical Footprint Project.

These initiatives offer multiple perspectives and opportunities for learning from peers in retail and other business sectors, as well as from NGOs, regulators, and academics. Many offer webinars, discussion groups, and meetings to share successes, challenges, and emerging trends and opportunities. Some initiatives are fee-based and require membership, while others are free to join. NGOs can be a valuable resource to retailers, and they often are well networked with solutions providers.

A growing body of scientific evidence has shown health hazards from exposure to chemicals such as phthalates, PFAS, and flame retardants.

The fact that so many companies have improved their chemical policies over the last year is thus inspiring and hopefully will be a strong impetus for others to act.

**DR. ROBIN M. WHYATT, COLUMBIA UNIVERSITY
COMMENTING ON RESULTS OF THE 2019
RETAILER REPORT CARD.**

Engaging with external stakeholders is beneficial both internally and externally. For example, both the [Chemical Footprint Project](#) (CFP) Survey and Mind the Store [Retailer Report Card](#) evaluate companies on their external engagements. In addition, because the Mind the Store retailer report card uses criteria aligned with the CFP, this Guide will help retailers boost their score in the annual Mind the Store retailer report card ranking.

The Environmental Defense Fund has published [A Roadmap to Sustainable E-commerce](#) that includes tips for assessing and reducing chemical and carbon footprints.

b. Establish a chemicals policy and integrate into business strategy.

Retailers often choose to start a chemicals management program by determining a restricted substances list (RSL) or a watch list for action.

Embedding a RSL in an overall chemicals policy can help ensure its successful implementation. A chemicals policy is a corporate level statement that addresses how an organization manages chemicals in its products, materials, supply chains, and operations. A chemicals policy is distinct from a company's overall sustainability policy in that it provides specific guidance related to chemicals management beyond what is required by regulation.

A comprehensive chemicals policy aims to avoid chemicals of high concern and includes a stated preference for the use of safer alternatives.

Model corporate policies

A chemicals policy articulates an organization's strategy for both reducing its chemical footprint (that is, the use of CoHCs in products and supply chains) and promoting safer alternatives. The Environmental Defense Fund's [Model Chemicals Policy for Retailers of Formulated Products](#), defines a comprehensive framework and includes:

- a vision statement;
- the scope of products that the policy applies to;
- supply chain transparency – supplier requirements for disclosing chemical ingredients;
- informed consumers – commitment to disclose chemicals in products on packaging and online;
- product design – commitment to creating a list of CoHCs, engaging suppliers in substituting CoHCs with safer alternatives, and measuring reductions in CoHCs; and
- public commitment – being transparent about the policy along and progress to meeting goals and outcomes.

Retailers with private label products can also use the [BizNGO Chemicals Policy Template for Brands and Manufacturers](#) as a model for corporate policy which builds from EDF's retailer policy. Both of these templates mirror the questions in the CFP Survey on chemicals management and the SASB questions to retailers on their chemicals management. Implementing the key elements of a chemicals policy will allow retailers to reduce the chemical footprint of the products they source and sell and become industry leaders.

Examples of Retailer Policies

Examples of retailer chemicals policies below show the range of issues that retailers are addressing in their policies. All are publicly disseminated. Some are more comprehensive than others but at a minimum, these policies include a RSL and applied product scope. Many retailers add their promotion of vendors' use of safer alternatives such as EPA's Safer Choice labeled products, and request for product ingredient disclosure from brands. More comprehensive policies provide a vision statement, actions taken to increase the use of safer chemistries in their supply chains, and continuous improvement goals with timelines.

- **Bed Bath and Beyond** [Chemicals Policy](#) which is embedded in the company's Corporate Responsibility Report, contains a RSL for all products, a Flame Retardant list for some products, and a Priority Chemicals list for household cleaning, personal care and cosmetic products. The goal is elimination of [Priority Chemicals](#) from owned brand baby personal care products by the end of 2020 and the retailer will strive for ingredient disclosure on

An important principle in chemicals management is, "don't let the perfect be the enemy of the good." Most retailers start with a focus on eliminating CoHCs from a few key categories of private label products. They then expand their CoHC list and product categories with requirements for greater disclosure of chemical ingredients from suppliers, a stated preference for safer alternatives, and public reporting on progress to goals. Clean Production Action encourages retailers to develop a chemicals policy that addresses all six attributes of EDF's model policy, though we recognize that for many retailers it may be difficult to initially gain senior management support for a comprehensive policy at the beginning of this journey.

Most retailers start with a few key categories of private label products and a list of chemicals of high concern as a way for companies to get some early wins and build momentum.

owned brand baby personal care products both online and on product packaging beginning in 2020. The Company also encourages all vendors of household cleaning, personal care, and cosmetic products to include ingredient disclosures on product packaging as well as other recommendations.

- **Best Buy** Chemicals Policy is contained in their [corporate report](#) noting that they will continue to participate in chemicals management work groups with organizations such as the Responsible Business Alliance and the Green Chemistry & Commerce Council. Their [Chemical Management Statement](#) details their RSL, Manufacturing Restricted Substances List (MRSL) and their Reporting list of chemicals for private label and direct import products.
- **Amazon** [Chemicals Policy](#) states that the baseline list of chemicals of concern included on their first RSL identifies the chemicals that they will seek to avoid in Amazon-owned Private Brands baby, household cleaning, personal care, and beauty products in the U.S. and Europe. They prioritize which chemicals of concern to focus on based on product type, customer concerns, and the availability of safer alternatives. The retailer notes that they will expand this policy to additional brands, product categories, and geographies over time.
- **Costco** [Chemicals Policy](#) is comprehensive and includes a vision statement: 'Costco's Chemical Management Policy helps to protect the health and safety of our members and the environment by establishing and developing products and processes that are safer, healthier, and more sustainable. We strive to go beyond the boundaries of regulatory compliance, in an effort to reduce or remove potential chemical harm to humans and to the environment. We recognize that this will be an area of continuous improvement for us as new rules, regulations and testing protocols are introduced.'

The retailer outlines their RSL with product categories and provides details about how they work with suppliers to find safer alternatives. The Costco Smart Screening Program uses third-party laboratories to identify and reduce over 300 chemicals of concern in both own brand and national brand product categories including: children's and adult apparel, bedding, home textiles, pet beds, furniture, luggage, handbags, sporting goods, personal care products, cleaning products, and more. Screening results are reviewed with suppliers and information is provided in The [Smart Screening User Guide](#) to help suppliers develop safe replacement chemicals and processes.

- **Walgreens** [Chemicals Management](#) addresses RSLs that go beyond regulatory compliance, disclosure of product ingredients, reporting on progress and search for safer alternatives. Their detailed [chemicals policy](#) lays out a vision statement, specifies the RSL used in defined product groups, and describes how it will promote transparency: 'Walgreens Boots Alliance will pursue a long-term goal of full ingredient transparency, including generic terms such as 'fragrance,' for Walgreens and Boots owned brand and exclusive consumer retail formulated products in the baby, beauty, personal care, and household cleaning product categories. Annually, we will measure and report our progress toward fuller ingredient disclosure.'

- **Ahold Delhaize** Sustainable Chemistry Policy, announced September 2019, is not yet incorporated into their yearly sustainability reports. The retailer is building on a previous commitment to remove all synthetic colors, artificial flavors, artificial preservatives, sweeteners, MSG, and high fructose corn syrup from all private brands products by 2025. The retailer will produce a RSL that will be updated regularly and collaborate with suppliers to advance safer chemistries. Beginning in 2020, Ahold Delhaize USA and its companies will participate in The Chemical Footprint Project, reporting annually on progress toward the commitment.
- **CVS Health** [Chemicals Policy](#) is based on customer feedback for safer chemicals. The retailer has a RSL for specific product categories what is updated yearly, and is committed to removing parabens, phthalates and the most prevalent formaldehyde donors from own brand products by the end of 2019. The retailer's [2019 CSR report](#) notes they continue to reduce chemicals of concern through ongoing collaboration with NGOs and since 2016 CVS has participated in the Chemical Footprint Project as a signatory.
- **H&M Group** [Chemical Roadmap](#) is a comprehensive approach with a bold vision of toxic-free fashion by 2030. The retailer gives specific goals about how they will report on progress through a range of measures including: traceability of the input of chemicals used in H&M Group production for commercial goods by 2030; policy engagement to push legislation and support public policies that promote progressive chemical management; transparency about chemicals with customers including full public disclosure of wastewater discharge test data; and the promotion and development of greener chemistries in their supply chain. The retailer was one of the first in the industry to establish a Chemical Restrictions List in 1995, which has been constantly updated and with which their suppliers are contractually bound to comply. The retailer provides metrics on their reduction of hazardous chemicals in their supply chain and provides information on their roadmap to achieving a clean circular economy for their products.
- **Walmart** released its initial list of eight chemicals of high concern in 2013 and in 2017 published its [Walmart Sustainable Chemistry Commitment](#). The commitment is detailed and addresses the criteria in the EDF policy framework for retailers. The commitment covers formulated (chemical-based) consumables products sold through Walmart U.S. and Sam's Club U.S. store in defined product categories such as health & beauty aids, pet supplies, laundry & home care, and baby care. Walmart aims to reduce by 10 percent the consumables chemical footprint of Walmart U.S. and Sam's Club U.S. stores by 2022. A strength of its chemicals policy is the [transparency of the metrics](#) used to assess progress towards the goal of ingredient disclosure, chemical footprint reduction and number of suppliers using third party certifications for safer chemical ingredients. Walmart was the first retailer to participate in the Chemical Footprint Project survey as a responder.
- **Target** has a very comprehensive [chemicals policy](#) which is based on a commitment to drive transparency, proactive chemical management and innovation across all the retailer's owned and national brand consumer products, and operations. In 2018, Target released their first Restricted Substance List (RSL) and Manufacturing Restricted Substance List (MRSL) for their

textiles categories and has subsequently established a vision, detailed set of goals to advance safer chemicals in all products and quantitative metrics to these goals. The retailer offers chemical ingredient disclosure to consumers through a series of icons and online information that is searchable via brands or product categories. The retailer has confirmed the materiality of chemicals as a 'higher value' in their stakeholder engagement, details of which are available in their 2019 corporate report.

- **The Home Depot** [chemical policy](#) is based around increasing the assortment of products that have transparency of product ingredients and third-party certification of chemical ingredients, and that meet high environmental standards. The retailer is working with suppliers on green chemistry initiatives particularly in categories with the greatest potential impact on indoor air quality and they list their [RSL for specific product categories](#).
- **Credo** is a mission-driven retailer with the vision of changing the Beauty industry noting that Beauty is one of the least regulated consumer categories for chemical ingredients. All brands avoid using the ingredients on the retailer's 'Dirty List' comprising 2700+ chemicals and must meet the Credo Standard for sustainable, ethical, and transparent products. They further inform consumers through hazard-based justification for allowable ingredients.
- **Whole Foods Market** [Quality Standards](#) detail their RSL of over 100 ingredients for beauty and body care and 70+ chemicals for cleaning products where in must be listed on the label, except for proprietary fragrance and enzyme blends.

Retailers participating in the [Chemical Footprint Project \(CFP\) Survey](#) are awarded points for having a chemicals policy that:

- aims to avoid CoHCs;
- has an explicit preference for the use of safer alternatives;
- addresses chemicals in products, packaging, facilities, and supply chains; and
- is posted publicly.

c. Implement and communicate the chemicals policy.

Ensure executive level buy-in.

To become a retailer leader, it is essential that employees are knowledgeable about their company's chemicals policy, engaged in its implementation, and rewarded for their participation. In addition, a systematic transition toward the use of safer chemicals and products requires support and accountability at high levels of the organization. When a member of the executive team of an organization is accountable for reducing the use of chemicals

of high concern, it is more likely that he or she will engage other members of the company to help achieve this objective. This will also help resolve any perceived competing measures of success between buyers and sustainability staff.



Name a chemicals management point of contact.

Having one or more points of contact who are accountable for the different aspects of managing chemicals in a company demonstrates investment in chemicals management and clarifies communication inside the organization and outside with suppliers and customers. It is helpful if the contact's job title identifies his/her chemicals management role. It is not necessary to have professional toxicologists or chemists on staff. Consultants with this expertise can support specific and in-depth scientific or technical needs.

Communicate the contact's name internally to all staff and to relevant supply chain partners, in particular Tier 1 suppliers, along with a description of the point of contact's duties and expectations of suppliers. Duties may include:

- Coordinating the prioritization, creation, and updating of a list of CoHCs.
- Reviewing documentation from suppliers.
- Communicating any changes to the list of CoHCs to suppliers.
- Responding to suppliers' questions regarding the list of CoHCs.
- Acting as the organization's contact for sectoral initiatives.

The contact(s) may be located in different areas of an organization, such as stewardship, supply chain, or sustainability. Some companies name two points of contact, one in regulatory affairs/health and safety,

to address regulated chemicals, and one in the sustainability or stewardship group, to address chemicals that are not regulated, but of concern. If more than one person is named as the point of contact, a coordinated response to issues, concerns, and questions that arise will be most effective.

Questions from customers or suppliers regarding CoHCs may need to be answered by staff in different departments in the company such as engineering, financial, and regulatory affairs. In this case, the point of contact would act as an intermediary, determining who is best placed to respond to questions and communicating answers to suppliers on their behalf.

Communicate the chemicals policy internally and externally.

When implementing the policy, educating all relevant staff and suppliers is critical, as is active ongoing communication on progress toward meeting goals. Periodic reporting requirements to measure progress will help provide incentives to devote time and resources to implement a chemical policy. Publicly reporting your chemicals policy meets consumer and investor demands.

CONTACT US



MODULE 2

Restricted Substances List and Priority Products: Removing Chemicals of Concern in Products



a. Identify priority products and chemicals of high concern (CoHC)

Retailers usually begin by prioritizing a small list of CoHCs in defined product categories for action. Criteria for choosing this list may include: the volume of the chemical contained in products, the likelihood of exposure to chemicals in these products, anticipated regulatory actions, public concern, or some combination of these criteria. Continuous improvement then involves identifying a longer list of CoHCs and expanding the product categories for action.

Choosing product categories involves multiple criteria. A retailer can choose a single chemical in a single product category, such as Bisphenol A (BPA) in water bottles. This is the process taken, for example, in California under the Safer Consumer Product (SCP) Regulations, where the state prioritizes chemicals by product category, such as methylene chloride in paint strippers. More expansive efforts include all CoHCs in a product category (e.g., household cleaning products) or a single CoHC across all product categories. In addition retailers and some regulators are focusing on entire classes of chemicals for restriction. The recent proposal by California's Department of Toxic Substances Control to list treatments containing the entire class of PFAS chemicals used as treatments on carpets, upholstery, clothing and shoes, as Priority Products under the SCP regulations, is a case in point. The retailers Lowe's and Home Depot took measures to stop selling carpets and rugs containing PFAS.

Product categories

Priority product categories vary by type of retailer. A department store, office supply store, home improvement store, and sporting goods store each carry distinctly different types of products. Each product category has its own chemical hazard and exposure concerns. Exposure to CoHCs is an important consideration when prioritizing product categories for action. Consider how likely it is that humans will

come into contact with the CoHC, and the population that could be exposed. Will vulnerable groups such as children, pregnant women, or people with compromised immune systems be exposed?

Examples of products with high exposure potential to vulnerable groups include any product intended to be applied to the body or sprayed, food contact materials and products intended to be chewed or

mouthed by small children. Other products include carpets and rugs where infants crawl, and products used by babies and children such as car seats, nap mats, and baby furnishings. Exposure to hazardous chemicals in such products occurs because many chemical additives are not bound in the substrate and therefore may leach into the environment where humans can be exposed through inhalation or ingestion. Another example is electronic products with flame retardant chemicals where tests have shown these chemicals to be released from the plastic casings and adhere to house dust posing ongoing exposure.

Take action on formulated products.

Many retailers begin developing a chemicals management program with a focus on formulated products. Formulated products refer to a preparation or mixture of chemical substances that can be gaseous, liquid, or solid (e.g., paints, liquid cleaning products, adhesives, coatings, cosmetics, detergents, dyes, inks, or lubricants).

Retailers often prioritize formulated products for action because consumers have greater awareness and concern about chemicals in these products because they are applied to the skin. Target, for example, started with personal care, beauty, household cleaning, and baby care products. Whole Foods Market prioritized household cleaners. And Walmart prioritized household cleaning, personal care, beauty, and cosmetic products.

Most retailers first prioritize action on their private label brands and then extend

restrictions to both private label and national label brand products in the same product scope.

- CVS Health prioritized its private label lines of beauty and personal care products, and committed to remove parabens, phthalates, and formaldehyde donors from these products.
- Amazon's first RSL applies to its private label products, including baby (shampoo, lotion, wipes), household cleaning (all-purpose, kitchen, and bathroom cleaners), personal care (shampoo, sanitizers, moisturizers), and beauty (make-up) products.
- Rite Aid first focused on eight CoHCs in formulated private label products, then expanded both its list of CoHCs and its application to include formulated products made by national brands.
- Walmart's chemicals policy focusses on its "formulated consumables" products, which includes cleaning and personal care products. Walmart first identified eight High Priority Chemicals from its longer Walmart Priority Chemicals list as a starting point for suppliers. In 2016 Walmart released the identity of the eight high priority chemicals as well as the almost 2,000 priority chemicals in its Priority Chemicals List. In 2017, Walmart announced a 10% chemical footprint reduction goal for their consumables by 2022.



Take action on articles.

Retailers are increasingly focusing on CoHC in articles. The term 'article' comes from the European Union's chemicals regulation known as REACH, and this terminology has become commonplace. An article is: "an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition." Examples of articles include furniture, electronics, household goods, and apparel. These product categories have many associated CoHCs not usually found in formulated products such as per- and polyfluoroalkyl substances (PFAS), organo-halogenated flame retardants, PVC plastic, BPA, and heavy metals.

Identify product categories containing specified CoHCs and communicate to suppliers.

Most retailers communicate both the CoHC list and the product categories to suppliers because it is easier to identify products or product categories that contain chemicals of concern, such as BPA in water bottles, food cans, and cash receipts, or PFAS in all carpets and rugs and packaging.

For example:

- H&M group's Chemicals Program has separate restriction lists for various product groups ranging from textile products, accessories, cosmetics, food contact products, toys, electrical products, medical devices, aerosol dispensers and furniture.
- Marks & Spencer is a UK retailer that has practiced Responsible Chemicals Management since 2008. The 2020 update of their MRSL and RSL is applied to very specific product categories such as the prohibition of Bisphenol A in thermal paper and plastics; alkyl phenol ethoxylates in all fibre materials; or phthalates in all clothing, footwear and accessories. The RSL lists over 40 chemicals or chemical classes applied to defined product categories.



b. Develop a restricted substances list (RSL), a manufacturing restricted substances list (MRSL), and a watch list

The most relevant CoHCs for a retailer will depend on the product category or categories it prioritizes for action. The CoHCs that many retailers initially prioritize are chemicals of concern to NGOs, consumer activists, and/or government regulators. These chemicals can form a RSL, a MRSL, or a watch list for restriction or other action.

The purpose and scope of a list of CoHCs will vary depending on the retailer and its products. Of course any retailer's list of CoHCs should comply with the regulations in the regions where it operates. States and local governments may have their own restrictions and reporting requirements.



Frequently, chemical restrictions include threshold levels permitted for a given concentration in a component or product.

When determining additional CoHCs, it may be valuable to involve staff from procurement, supply chain management, and government affairs, as well as staff and consultants with chemical expertise. NGOs can also be a good source of intelligence about known and emerging CoHCs of relevance to your product lines. Some third-party service providers have extensive information on different geographical regulatory requirements plus RSLs/MRSLs and priority lists beyond regulatory compliance. For example:

- [Toxnot](#) provides a robust commercial toolset that allows retailers to apply chemicals hazard assessment in their products and chemical inventories as well as providing support for reporting and compliance initiatives. Access to chemical hazard listings, including [GreenScreen List Translator](#) scores, are free.
- [Scivera](#) screens ingredient lists and offers a chemical hazard assessment of ingredients that do not appear on lists to help predict future restricted chemicals and materials.

 toxnot scivera

The BizNGO working group on chemicals management has listed key considerations for retailers to take when developing a list of chemicals of concern.

HOW TO DEVELOP A COHC LIST

What is the scope?

- Chemicals in products (brands and private labels) on store shelves (brick and mortar, and virtual)
- Chemicals used in the supply chain
- Chemicals in packaging
- Chemicals used in facility operations and maintenance (cleaning, grounds maintenance, etc.)
- Chemicals in built spaces (retail stores and office space)

What sources do you use?

- Laws and regulations
 - Laws and regulations in jurisdictions of operation/sales
 - Laws and regulations relevant to sector worldwide
- Standards, Trade Associations, & NGOs
 - Eco-label requirements
 - Sector generated CoHC lists (e.g., BPC)
 - NGO generated lists of CoHCs (e.g., SIN List, GSLT)
- Authoritative Bodies & Scientific Research
 - Authoritative lists: developed by government/inter-government/scientific bodies (e.g., IARC)
 - Emerging scientific evidence of a chemical's hazard, likely exposure routes and potential risk

What criteria do you use to prioritize CoHCs beyond compliance?

- Future regulations on store shelves (brick and mortar, and virtual)
 - Anticipated legal requirements
- Company values and goals
 - Organizational mission
 - Corporate policies and goals
- Relevance to product portfolio
 - Likely presence in products
 - Quantity used
 - Sales volume

- Chemical risks
 - Inherent hazard
 - Opportunity for exposure through supply chain and during production
 - Opportunity for exposure from product use
 - Vulnerability of exposed population (e.g., children)
 - Availability of alternatives that provide performance needed
 - Cost of alternatives
 - Brand reputation
 - Competitors
 - NGO/consumer concerns
- Business opportunities
 - Customer preferences
 - Product certifications & standards
 - Availability of alternatives that provide performance needed
 - Investor preferences, e.g., SASB key performance indicators

What action(s) did you take?

- Track
 - Collect information on chemical use
 - Identify watch list -- chemicals for possible future action
 - Inform suppliers of organizational preferences & intent to restrict
- Reduce
 - Work with suppliers to identify safer alternatives
 - Select suppliers that do not use specified CoCs
 - Avoid use in newly designed/formulated products
- Redesign/Reformulate
 - Work with suppliers to redesign or reformulate existing products to exclude the use of CoHCs and utilize safer alternatives
- Restrict
 - Restrict to de minimus level in all or specified uses
 - Do not allow in specified uses

Retailers generally take one of two approaches when developing an initial list of CoHCs. Some retailers select a limited number of high profile CoHCs to get started, and then expand this over time. Some retailers adopt an existing list of CoHCs developed by a government, scientific body, sectoral organization, competitor or an NGO.

Select a limited number of high profile CoHCs to get started, and then expand this over time:

Choosing a small number of high profile CoHCs allows retailers and their suppliers to focus on a smaller scope and expand it over time.

For example [Dollar Tree](#) lists an initial 17 CoHCs in specific private label products for elimination by 2020 or sooner.

[Dollar General](#) prioritized eight CoHCs to reduce or eliminate by 2022 from its private label core formulated products initially in Home Cleaning and Beauty & Personal Care.

Among "Walmart Priority Chemicals," [Walmart](#) worked with NGOs, academics, government, and industry stakeholders to identify a subset of eight "Walmart High Priority Chemicals" (HPCs) as a starting point for suppliers in Walmart's initial Commitment on Sustainable Chemistry in 2014. As of 2017, the retailer now flags over a thousand Priority Chemicals (PCs) in the WERCSmart system.

A commitment to review and expand the RSL is important for consumers and investors. For example [Rite Aid](#) first focused on eight CoHCs in formulated private label products, then expanded its list of CoHCs beyond private label products to include

formulated products made by national brands.

Retailers such as CVS Health and Walgreens update their RSL annually as well as report on progress.

Costco has a RSL of over 300 chemicals and provides updates in their annual corporate reports.

Adopt an existing list of CoHCs developed by a government, scientific body, sectoral organization, competitor or an NGO.

Retailers may choose to develop or adopt a longer list of CoHCs in addition to or instead of a shorter list. Selecting a well-documented list developed by a respected third-party organization can save time and money. These comprehensive lists may include chemicals that are regulated but not relevant to retailers.

See **Appendix A** for examples of lists of CoHC developed by regulatory bodies, sectoral organizations, and NGOs as well as chemical hazard assessment tools.

[Canadian Tire](#) sets out its chemicals of concern restrictions for both formulated products and articles that include specific chemicals of concern in product sectors, such as a prohibition of the use of brominated flame retardants in any product or a restriction of phthalates in children's products, as well as using the EU Substances of Very High Concern list for restriction in their own brand name apparel products.

Many brands and retailers involved in beauty and personal care products reference the [Beauty and Personal Care Sustainability Project](#) list, which is based on international chemical hazard lists. The full list of chemicals can be obtained via accessing the individual retailer's sustainability program,

although many of the lists can be accessed via independent database provides such as the [LOLI Database](#).

[Sephora's](#) private label products must comply with an extensive RSL and the retailer reports on its progress to safer alternatives and increased transparency.

Retailers can also consider adopting a MRSL for their own brand products and encouraging their suppliers to adopt the MRSL as well. Some chemicals used in manufacturing may cause negative health impacts to workers and communities as well as toxic impacts to fish or drinking water downstream from manufacturing sites. The textile industry is a leader in this area of establishing MRSLs and leading brands in the apparel and footwear sector comply with the MRSL requirements of the [Zero Discharge of Hazardous Chemicals \(ZDHC\) industry program](#). Retailers who sell own brand apparel are increasingly adopting this MRSL.

After finalizing a CoHC list, retailers need to communicate it internally and to suppliers. If suppliers are required to eliminate the CoHCs, they will need a timeline for elimination.

A watch list is a list of chemicals of concern that a company does not currently prohibit, but is considering prohibiting in the future due to scientific evidence that a chemical may cause harm to human health or the environment. This gives suppliers time to prepare for eventual restriction and seek safer substitutes.

Walmart has compiled its list of Priority Chemicals (PCs) by referencing chemicals that appear on a number of authoritative

and regulatory lists of the European Union, US EPA, and several US states. This list of over a thousand chemicals is used to measure the reduction of their Consumable Chemical Footprint by weight volume, by number of UPCs, and by number of suppliers. All of these [metrics are public](#).

The [Chemical Footprint Project has developed a CoHC list](#) which comprises over 2,200 chemicals that retailers can adopt as their priority chemicals list. If retailers use the same list of CoHCs and report on their chemical footprint reduction, they can be compared to their peers. Some third-party service providers have incorporated this list into a database for easier access and product screening.

Note it is important to keep up to date with chemicals of emerging concern. For example, the focus on per- and polyfluoroalkyl substances (PFAS) has galvanized leading retailers to work to eliminate this entire chemical class from food packaging and food service ware products, as well as carpeting.

List Compliance: Product Testing.

Customers and investors will want to know how RSL/MRSLs are being enforced and many retailers list compliance methods, testing protocols and threshold limits in their RSL/MRSL requirements with suppliers. Good collaborations with suppliers allow good knowledge exchange that is verifiable.

For example:

[IKEA](#) assesses chemical risk before production, and conducts testing during production and of final products both at their own laboratory and at external third-party laboratories to verify compliance. The retailer then conducts ongoing verifying tests as well as audits with random

checks to follow-up on fulfilment of requirements.

[Costco](#) utilizes third-party testing and data platforms to gather product ingredients bill of substances (BOS) of cleaning products and health and beauty products. These products are screened against the list and other regulated chemical lists. When chemicals of concern are identified, suppliers are encouraged to utilize toxicologists to identify preferred alternatives.

c. Commit to continuous improvement

Expand the CoHC list and product scope with timelines and update the chemicals policy regularly.

Retailers need to stay current with new regulations and scientific research on chemical hazard listings. Establishing an annual process to review and decide on changes to the list of CoHCs and product scope will allow reviews to happen in an efficient, timely manner. Stakeholders and NGOs can be a valuable source of information, along with third-party service providers. For example, retailers can use the freely accessed [Toxnot database](#) which compiles up to date chemical hazard information on over 50,000 substances.

Note that while a list of CoHCs helps to know what is not in products, it does not provide information on what is in a product. A CoHC may be replaced by another chemical that is of equal hazard but is not on a list because lists are lagging indicators. The process of putting a chemical of concern on a list can be a slow process due to the challenge of confidential data from suppliers, the resources involved to do comprehensive toxicological testing, and the review time within the regulatory process. That is why a comprehensive chemical inventory is invaluable and why retailers need to keep up to date with chemicals of emerging concern.

Publicly reporting on the expansion of a chemicals list along with timelines, communicates to consumers and investors a commitment to transparency and improvement. For example, in April, 2018 [The Home Depot](#) announced it has asked its suppliers to exclude nine chemicals from residential household cleaning chemical products sold online and in Home Depot stores by the end of 2022. This announcement builds on the company's chemical management strategy, first published in October 2017, as well as its commitment to work with suppliers to improve chemicals in categories with the greatest potential to impact indoor air quality.

[Target](#) set a goal of removing added Perfluorinated Chemicals (PFC's) and added flame retardants from textile products by 2022, and improve beauty, baby



care, personal care and household cleaning product categories by formulating without phthalates, propyl-paraben, butyl-paraben, formaldehyde, formaldehyde-donors, or NPE's by 2020.

For third-party brands, in 2019 [Sephora](#) identified a list of high-priority chemicals for reduction and elimination with a goal to reduce the number of products that contain any of the chemicals in the [nine chemical categories](#) by 50% in three years.

Walmart was the first retailer to set a chemical footprint reduction goal of 10% for consumables by 2022. Currently, consumers and NGOs are waiting to see how the retailer will commit to continuous improvement by expanding its product scope and increasing its chemical footprint reduction goal.

Support Green Chemistry research and innovation to increase safer alternatives.

Retailers who engage in green chemistry initiatives are rewarded by brand enhancement, investor interest, and NGO acknowledgement in the Mind the Store Retailer Report Card and the Chemical Footprint Project Survey. Support for innovation can take many forms.

For example:

[Canadian Tire](#) eliminated BPA from cash register receipts in 2018, and is now looking for enhanced alternatives to also eliminate Bisphenol S (BPS) and Bisphenol F (BPF) – chemicals which are now known to be regrettable substitutes. The retailer is also expanding their use of electronic receipts in all associate stores.

In March 2019, [Target](#) hosted a hackathon to bring the industry together to spark innovation on the removal of undesirable flame retardant chemicals from children's loose-fit sleepwear. Together with brands, other industry partners and students, innovative proposals were developed that would meet regulatory requirements (e.g., flammability), guest preferences and sustainability goals. Target provided a stipend to the winning team and is working with the team to test the viability of its idea. Target aims to invest up to \$5 million in green chemistry innovation by 2022. The retailer's 2019 Corporate Report reports on its progress.

[Lowe's](#) plans to complete their transition to neonicotinoid free outdoor pesticides for all categories except Tree & Shrub Care by 2022. Neonicotinoids are implicated in the increase of [bee deaths](#) and other pollinators. In the absence of a relevant third-party certified standard other than organic certification, the retailer is working with suppliers to explore alternative Tree & Shrub Care chemistries that do not rely on neonicotinoids.



MODULE 3

Chemical Inventory: Working with Brands and Suppliers

a. Work to build a chemical inventory

Retailers need to know what chemicals are in the products they sell in order to identify where there are CoHC. Knowing which chemicals are – and are not - in products involves communication with suppliers, who themselves may not easily have the access to the data required. Many retailers are achieving success in gathering data from suppliers by giving the option of providing ingredient information to third-party service providers that will protect confidential business information.



It is important to begin identifying a list of CoHC and working to remove them, while also working to obtain full chemical ingredient disclosure from suppliers. Note that reputational and financial risk will usually fall on the brand or retailer if CoHCs are identified in products, so it is of value to seek full ingredient disclosure.

A complete chemical inventory and full ingredient disclosure from suppliers is challenging but it is a valuable goal for retailers because:

- Formulated products are increasingly subject to regulation in regard to ingredient disclosure and reporting. Retailers with own brand products will need to comply.
- The trajectory for full ingredient disclosure in articles is expanding. For example in the building materials industry, [Health Product Declarations](#) are increasingly required by purchasers.
- Chemicals of concern such as PFAS in textiles, carpets, and food containers are under consumer scrutiny and legislative action.
- Retailers can be proactive and prepared for new chemical regulatory restrictions and market demands if they have achieved full chemical disclosure for the products they source and sell.
- Retailers with a comprehensive system of data collection in place will reduce the burden on staff and suppliers as new voluntary and legislative requirements occur.
- Full ingredient disclosure helps retailers and suppliers to avoid regrettable substitutes, or the replacement of one CoHC with another that is equally or more hazardous.

- With full ingredient disclosure retailers can prioritize which CoHC to restrict now and which to restrict in the future. Such a watch list gives suppliers a heads up that a retailer is not currently restricting it but is collecting information about the extent of the use of a chemical. Retailers can use this watch list to calculate the chemicals footprint of products and benchmark their progress to reduce their use.

The CFP Survey promotes the practice of chemical inventory by evaluating the efforts companies make to identify CoHCs in products, and awarding points for the extent of chemical data collected from suppliers. The Survey also helps companies evaluate their systems for managing chemical data and ensuring supplier compliance with their reporting requirements

Retailers can ask suppliers to report to them on chemicals in products (business to business - B to B); and retailers can promote disclosure from the brand to consumers (business to consumers - B to C)

b. Engage brands & suppliers in disclosing chemicals in products (B to B)

Manufacturers of formulated products, such as cleaning solutions, personal care products, or cosmetics, generally have a better understanding of their product's chemical composition than manufacturers of articles, such as electronics, apparel, or furniture. The supply chain for articles is typically much longer and more complex than for formulated products and therefore information on chemical composition may be more difficult to collect. But some retailers are now seeking full ingredient disclosure from suppliers of articles as well due to customer demands and increasing regulatory requirements to eliminate CoHCs in articles.

Both Target and Walmart track their success in achieving chemical ingredient disclosure from suppliers. Target's success in achieving transparency to all ingredients, including generics such as fragrance in beauty, baby care, personal care and household cleaning formulated products by 2020 is reported on in its annual report. For example, [Target's 2019](#)

[corporate report](#) provides metrics on its ability to screen 76 percent of their in-scope assortment with at least 22 percent of products meeting its transparency goal in 2018.

Walmart provides metrics on supplier disclosure in its [2017 Walmart Sustainable Chemistry Commitment Report](#) with data on number of suppliers, UPCs and sales volumes that are meeting its transparency goals.

Requirement for disclosure to third party organizations is also promoted by retailer leaders. For example Home Depot recognizes suppliers who disclose product ingredients in their own communications or on packaging, or through a third party organization including, but not limited to: Cradle to Cradle Products Institute, HPD, UL Product Lens, and Declare Label.

The GC3 Retailer Leadership Council (RLC) has developed a Statement on Chemical

Innovation Priorities and [Transparency Road Map](#) to encourage improvements in supply chain and public transparency. This Road Map does not seek to set out requirements or standards for suppliers. Rather, it describes what the RLC views as best practices in the short-term (2019–20) and includes a longer-term vision that will need further development by all stakeholders. The RLC understands that legitimate confidential business information must be protected. This Statement also includes a set of chemical and application priorities for innovation in safer alternatives that the RLC has collectively identified.

Third-party service providers help retailers to access data from suppliers.

Third-party service providers collect data from suppliers, manage it, and provide the data in an organized format to retailers. This allows suppliers to maintain control of confidential business information. Service providers generally collect data from a number of suppliers for a number of retailers, streamlining the process for both suppliers and retailers. Third party service providers operate at different points in different supply chains. Examples of third party service providers popular with retailers include UL, and Toxnot. Walmart, for example, requires suppliers of consumables to provide online ingredient disclosure via WERCSmart, which is administered by UL.

[WERCSmart](#) connects manufacturers with retailers to meet product compliance, chemical transparency and safety requirements. WERCSmart is essentially UL's regulatory compliance platform for US formulated products allowing customers to organize, analyze, and share sensitive

product information with the highest standards of confidentiality. Suppliers can maintain a single formulation record that is used to support generation of retailer-specific regulatory guidance. Suppliers of formulated products register their products on WERCSmart. They provide full formulations (ingredient lists + ingredient concentrations) as well as other product data needed to generate guidance about how to transport, store and dispose of their products in compliance with national, state and local regulations. The system can also generate Safety Data Sheets for products to support hazard communication regulations. Over 50 retailers subscribe to WERCSmart to obtain data feeds containing this information for the products they have in their assortments.

[Purview](#) is UL's chemical policy and sustainability platform. With supplier consent, retailers can make use of WERCSmart formulation data and collect additional information from suppliers to assess products using a variety of evaluative frameworks. These frameworks can include retailer restricted substance lists, sector standards (like the Beauty and Personal Care Sustainable Product Rating system) or multi-attribute product curation standards. For example, Target operates its Clean Icon qualification program on Purview, screening products for Unwanted Chemicals and evaluating their ingredient transparency. Qualified products are awarded icons that Target promotes to its online and instore consumers as indicators of safer or more sustainable products. In addition, suppliers like Method operate their sustainable product development program on Purview.

c. Engage brands & suppliers in disclosing chemicals to consumers (B to C)

Require brands to report ingredients online and/or on packaging.

Requiring brands to report ingredients online will allow your customers to access this information. Retailers gain value from brand B to C disclosure because the more transparent, the less likely product ingredients will have high chemical hazards. This is one more way for retailers to have confidence that the products on shelves have lower hazards which in turn builds trust with customers.

Walmart began requiring brands to list Walmart Priority Chemicals on product packaging in January 2018. This requirement is intended to incentivize suppliers to phase out use of priority chemicals of concern.

Target reinforces this goal of product innovation claiming that ‘by supporting our vendors in being more transparent about the ingredients in products, we can spur innovation across all of our product categories and operations.’

d. Prefer brands who use safer chemicals and third party certifications

Actively preferring brands that avoid CoHCs and use safer chemicals requires intensive engagement with suppliers on the part of retailers. Third-party certifications can give retailers assurance that chemicals have been screened for reduced hazards. In a [2020 published report](#), Sustainable Purchasing Patterns and Consumer Responsiveness to

Sustainability Marketing by New York University’s Stern School of Business, researchers found that in four of the five categories examined, third-party certified sustainability-marketed products significantly outgrew sustainable products that had sustainable messaging, but no third-party certification.

Home Depot recognizes suppliers who demonstrate a commitment to ingredient transparency. Suppliers should disclose product ingredients in their own communications or on packaging, or through a third party organization including, but not limited to: Cradle to Cradle Products Institute, HPD, UL Product Lens, and Declare Label

Retailers are increasingly including this preference for third-party certified products in their chemicals policies.

Walmart encourages its suppliers to use methods, databases, and lists recommended in its Sustainable Chemistry Implementation Guide to reduce and eliminate priority chemicals using informed substitution. The retailer tracks the number of third-party certified products from its suppliers and makes these metrics public.

The Home Depot Eco Options® program identifies environmentally preferred products, including cleaners that have

obtained certifications from independent third party testers such as EPA's Safer Choice and Cradle to Cradle Certified™.

In four of the five categories examined, third-party certified sustainability-marketed products significantly outgrew sustainable products that had sustainable messaging, but no third-party certification.

[INYU Stern School of Business](#)



The GC3 created the [Retailer Tools for Safer Chemistry](#) that show a variety of Restricted Substances Lists, Standards, Certifications & Labels and Chemicals Management Software available for a variety of product categories. For example, retailers can view which third-party certifications apply to:

- cleaning and janitorial products
- furniture
- Health & Beauty, cosmetics/, pharmacy
- lawn and garden
- textiles, and more

MODULE 4

Chemical Footprint Measurement: Getting Started

Chemicals are the New Carbon. Similar to measuring a carbon footprint using greenhouse gas emissions, a chemical footprint measures the presence of hazardous chemicals allowing retailers to set quantifiable metrics and chart progress over time.

A RSL and/or MRSL that includes a timeline for suppliers to comply are a means to achieve the elimination of these chemicals in specified product categories, but it does not quantify the reduction of these chemicals.

Chemical footprinting on the other hand, is the process of evaluating and measuring the presence of hazardous chemicals in products, manufacturing processes, supply chains, and/or packaging. By measuring a baseline chemical footprint and then continuing to measure it on an annual basis, companies can quantify the mass of CoHCs reduced.

Chemical footprinting can help retailers to:

- Conduct a gap analysis of an organization's performance in managing chemicals.
- Identify opportunities for action.
- Enable benchmarking of performance with clearly defined metrics.

Beginning in 2017, Walmart has annually participated in the Chemical Footprint Project based on aggregated information it receives through the Sustainability Index and The WERCS.

By 2022, Walmart aims to reduce its consumables chemical footprint for Walmart U.S. and Sam's Club U.S. stores by 10 percent.



Chemical footprints provide retailers with baseline data for evaluating performance and benchmarking progress away from hazardous chemicals to safer alternatives. Measuring a chemical footprint is done using count (number of chemicals of concern) or mass (lbs. or kgs of chemicals of concern used) within a defined product scope. It can be challenging to collect the data needed to calculate a chemical footprint. It is a dynamic process with the goal of continuous improvement to get to zero in the use of hazardous chemicals.

This requires a good chemical inventory and a good chemicals management system to benchmark progress away from hazardous chemicals to safer alternatives.

Retailers can move beyond setting a RSL and begin chemical footprinting with the following steps

1. **Choose a product category**
2. **Measure CoHC by mass/and or count** in that product category using a robust chemical hazard list. The CFP has a comprehensive list of CoHC to reference and also the smaller EU SVHC Reference List to help retailers get started.
3. **Set goals to reduce a chemical footprint** in defined product categories and work with suppliers to achieve that goal with transparently safer alternatives.
4. **Expand the product categories** for additional chemical footprinting.

We believe that chemical management is a meaningful risk that companies are obligated to disclose to investors, and it is in the company's interest to report if and how it can reduce its chemical footprint.

[SUSAN BAKER, TRILLIUM ASSET MANAGEMENT, 2020](#)

The CFP provides [resources](#) to help explain the process of chemical footprinting.

The Chemical Footprint Project asks about the goals that a company sets to reduce CoHCs, its efforts to establish a baseline chemical footprint and measure progress, and its process for assessing and implementing safer alternatives.

a. Measure the chemical footprint in defined product categories

Measuring chemical footprints requires collecting and managing data on CoHCs in products, including the number and mass of CoHCs in each product. Choosing the products for chemicals footprinting is similar to choosing priority products for RSLs. Walmart, for example, chose consumables for Walmart U.S. and Sam's Club U.S. stores to measure chemical footprints.

b. Set goals to reduce the chemical footprint in defined product categories

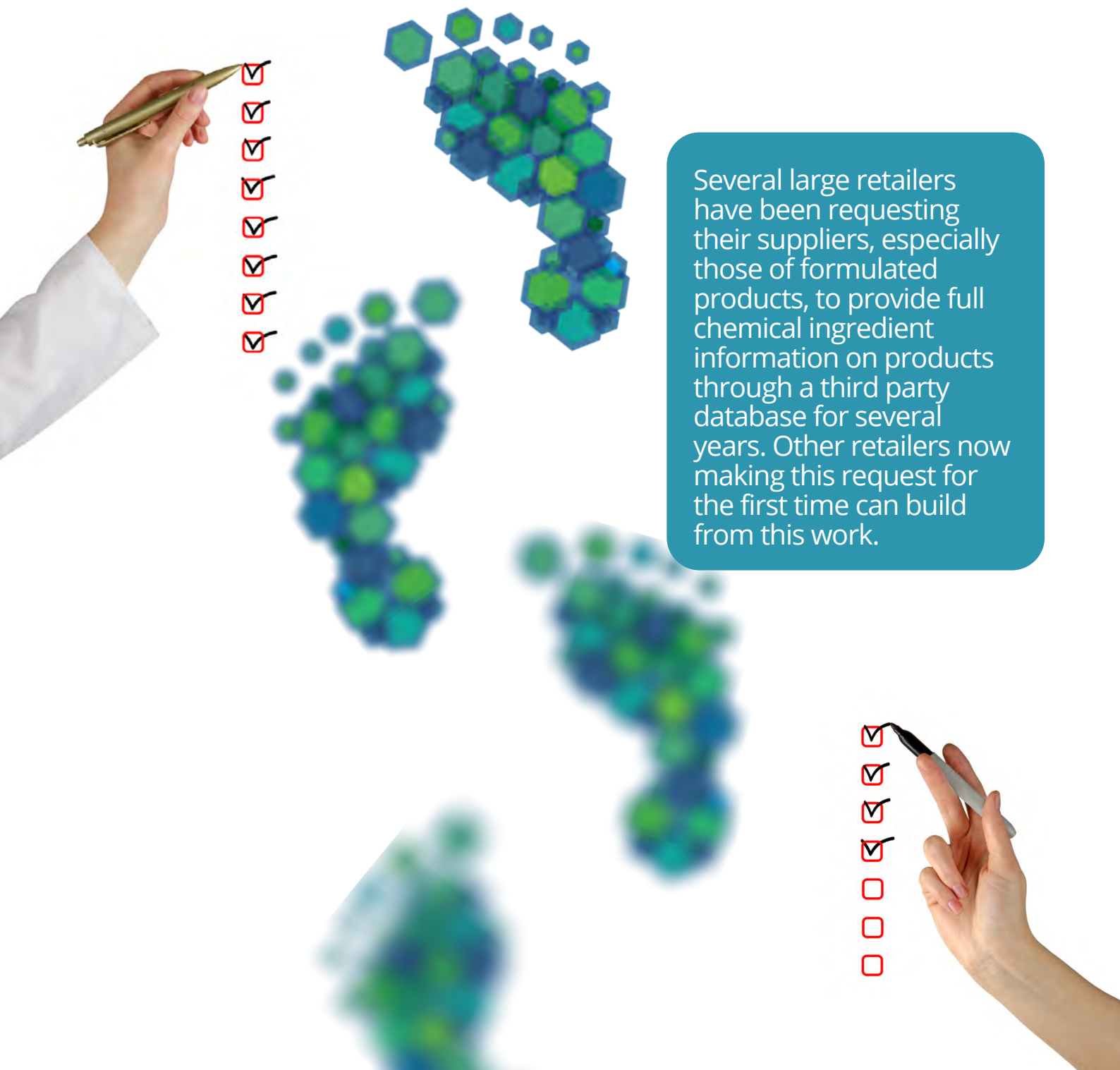
Once retailers choose a CoHC list and define priority products they can set timelines and metrics to reduce their chemical footprint.

Retailers can begin by asking for disclosure on, at minimum, the presence of chemicals on the European Union's SVHC List in products from their suppliers. In fact, that is an option offered in the CFP Survey to get started and understand the process of chemical footprint measurement. Retailers should then use that information to set chemical footprint reduction goals, and increase the number of chemicals on the reporting list.

The Survey guidance notes that the absence of SVHCs in a product category does not equate to a zero chemical footprint, because the data field is too small. Ideally, a retailer should expand to the CFP list of over 2,200 chemical substances.

Several large retailers have been requesting their suppliers, especially those of formulated products, to provide full chemical ingredient information on products through a third party database for several years. Other retailers now making this request for the first time can build from this work. Major brands will already be familiar with the request, and retailers may be able to access the same third party database. As a result, retailers just beginning this work should be able to skip a pilot phase where they ask suppliers to report on a small number of chemicals, gradually ratcheting up the number over time.

Several large retailers have been requesting their suppliers, especially those of formulated products, to provide full chemical ingredient information on products through a third party database for several years. Other retailers now making this request for the first time can build from this work.



MODULE 5

Public Disclosure of Retailer Policies, Goals and Progress: Being Transparent

Investors increasingly want information on corporate chemical policies and want to understand how companies will evaluate progress to reduced chemical risk. Consumers and NGOs increasingly rate retailers on their ability to provide assurance that hazardous chemicals are not present in the products they buy, and the Mind the Store Retailer Report Card facilitates consumer engagement with retailers for continuous improvement in goal setting.



Leading retailers are communicating their RSLs and chemicals policies to the public to ensure that key stakeholders, including investors, NGOs, and customers, are aware of their commitment to safer chemicals adoption. Progress made should be included in corporate social responsibility reports, ideally in a separate section so that investors and other stakeholders can identify it easily.

Internal organizational resistance may arise to publicly disclosing a RSL. Some may believe that by not discussing chemicals management, customers, potential customers, and investors will not associate the company's products with any hazard. But NGO and investor requests for disclosure will continue to grow while public awareness of chemical safety in products will require valid responses from retailers. Silence on the topic may be perceived as a lack of care for the health and well-being of customers and the general public.

Target Clean is a new, easy way to identify products formulated without specific ingredients you may not want.

[TARGET](#)

Manufacturers of chemicals contained in RSLs may also object to the list being made public. However, since retailers and brands are in the public eye, they, unlike chemical manufacturers, usually face the most financial and reputational risk.

a. Measure the chemical footprint in defined product categories

As listed in Module 1, many retailers post their chemicals policy online, thereby communicating chemicals management priorities to customers, consumer and environmental organizations, investors, and suppliers. Public posting of corporate policies online may seem a bold move to take, but increased transparency makes good business sense and is increasingly the norm. It communicates to investors how the retailer is working to reduce the regulatory, reputational, and market risks of hazardous chemicals in products and supply chains. It also informs consumers and advocacy organizations that want to understand the retailer's approach to ensuring chemical safety in products. Progress made toward reducing the use of CoHCs can be included in the retailer's annual social responsibility report as well as in the annual Chemical Footprint Project Survey.

Mind the Store Campaign's Retailer Report Card annually ranks retailers on publicly available information about their chemicals management practices. The Retailer Report Card uses a transparent set of criteria and scoring methodology that can give guidance to retailers as well as provide information on a competitor's efforts to reduce CoHC in products and manufacturing. As noted, the Retailer Report Card has criteria aligned with the framework of this Guide, so suggestions in this Guide will help retailers increase their yearly benchmark score.

b. For private label products, disclose chemical ingredient information (B to C)

A 2017 Harris poll found that [more than six in ten women in the US report that they read labels on personal care products and avoid products that contain certain chemicals](#). Health concern around the thousands of chemicals used in 'fragrances' have trumped traditional claims of confidentiality and many formulators, retailers and brands are now disclosing ingredients on their product labels and company websites.

Target has developed [Target Clean icons](#) and [Wellness icons](#) with detailed online information about the chemicals that have been restricted in each product group. Target Clean was introduced to online shoppers in March 2019 across over 4,000 products in household essentials, beauty, personal care, baby essentials and pet food categories, and identifies products formulated without a group of commonly unwanted chemicals such as phthalates, sodium laureth sulfate, propyl-paraben and butyl-paraben, and others relevant to key frequency categories. Users can search by product category or brand. Target Clean continues to be rolled out across the retailer's stores. Wellness icons include phthalate-free, paraben-free and other wellness attributes across a larger range of product categories.

[Sephora](#) has taken a similar approach by giving consumers the option to choose 'Clean by Sephora' products which comply with the retailers 1,300+ RSL. By 2020, Sephora aims for 100% of formulated beauty and personal care products to have all intentionally added ingredients listed on its US Sephora.com website.

The [Credo Clean Standard](#) takes a ‘preferred chemical’ approach by ensuring all beauty and personal care brands comply with the retailer’s standard for chemicals safety, chemical sourcing, sustainability, sourcing and transparency. This includes the requirement that products are free of over 2700 chemicals listed in the retailer’s RSL. [Credo provides comprehensive chemical ingredient disclosure](#) including the rationale for specific chemical ingredient use in products.

In the absence of ingredient labeling regulations, retailers can voluntarily disclose chemical ingredients online and on pack for own brand products. For example [CVS](#) gives consumers the option of buying more than 1,000 skin care products labeled as CVS® Clean which are free from parabens, phthalates and formaldehyde donors and for some products there is a full ingredient list rather than just a ‘free of’ list.

c. Disclose progress to goals

Retail leaders report on progress to goals in annual corporate reports. It is more meaningful to demonstrate quantitative progress to meeting goals rather than including generic qualitative statements.

Both Walmart and Target calculate metrics on supplier ingredient disclosure, reduction in CoHC use and other goals set in their policy statements. As the first retailer to commit to a chemical footprint goal, [Walmart supplies metrics](#) on its progress to a 10% reduction of its consumables chemical footprint for Walmart U.S. and Sam’s Club U.S. stores by 2022. It does by measuring weight reduction, Universal Product Codes (UPCs) and number of suppliers (data from 2017). However, the retailer does not track progress on chemical footprint reduction beyond consumables.



[Target’s chemicals policy](#) aims to address their entire value chain, operations and every product category. [Target’s 2019 report](#) stated that they achieved full business-to-business ingredient disclosure in owned-brand beauty, baby care, personal care and household cleaning formulated products. They report progress on access to screen 76 percent of in-scope assortment, with 22 percent meeting their transparency goal and 44 percent meeting their chemical management goal as of 2018.

The Mind the Store Campaign [Retailers’ Report Card](#) ranks retailers on progress to comprehensive chemicals management with transparent scoring methodology, key findings, conclusions, and recommendations. The campaign continuously expands the number of retailers assessed and has become the leading NGO scorecard for ranking retailers on progress towards safer chemicals adoption.

REDUCTION OF WALMART PRIORITY CHEMICALS

Reduce volume of In- scope Walmart Priority Chemicals in our Consumable Chemical Footprint

Weight (Volume) of in-scope PCs in Products Sold in 2017	Percent change vs. previous year	Percent change vs. baseline
189,448,032 lbs	N/A	N/A

Restrict and Eliminate In-scope Walmart Priority Chemicals in our Consumable Chemical Footprint

Metric	2017	Percent change vs. previous year	Percent change vs. baseline
# of UPCs containing in-scope PCs	65% of UPCs	N/A	N/A
# of Suppliers using inscope PCs	45% of Suppliers	N/A	N/A

Reduce volume of, Restrict, and Eliminate HPCs

Weight (lbs) of HPCs in Products Sold in 2017	# of UPCs Containing HPCs	# of Suppliers Using HPCs
475,242 lbs	11% of UPCs	16% of Suppliers

Source: [CY 2017 Walmart Sustainable Chemistry Commitment Report](#)



[Cancer is the leading cause of death by disease among children in the United States.](#) But businesses can stop the use of chemicals known to cause cancer and other diseases. A dramatic and equitable transition away from hazardous chemicals to safer alternatives is now a priority.

Retailers can play a huge role in building a safer world by demanding safer chemicals in their supply chain. We look forward to working with you for a healthier future. [Contact us.](#)

GLOSSARY

Alternatives assessment: A process for identifying, comparing and selecting safer alternatives to chemicals of concern (including those in materials, processes or technologies) based on their hazards, performance, and economic viability. A primary goal of alternatives assessment is to reduce risk to humans and the environment by identifying safer choices.

Article: An object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition.

Bioaccumulation: The accumulation of substances, such as pesticides, or other chemicals in an organism. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than that at which the substance is broken down in the body and excreted.

BPC: The Beauty and Personal Care Sustainability Project (BPC) is a pre-competitive collaboration of stakeholders across the industry value chain with the aim to increase the number of sustainable beauty and personal care products on retailers' shelves.

Brand: The originator of the final product and owner of any associated label/trademark. "Brand" includes a retailer's private label/private brand products.

Carcinogenic, mutagenic or toxic to reproduction: Substance of very high concern that is carcinogenic (causes cancer), mutagenic (causes damage to genes) or

reproductively-toxic (causes either a decrease in fertility or problems with development of the fetus).

Chemical:

- **In product:** Chemicals intended to be part of the finished product. An example is a durable water repellent chemical formulation that is applied to a textile. Another example is a chemical plasticizer added to a plastic product or component.
- **Management process:** A task or function towards a defined goal or objective. The combination of related processes comprises a management system.
- **Management system:** The set of procedures an organization needs to follow to meet its objectives. A "chemicals management system" describes the set of procedures an organization needs to follow to meet its chemicals management objectives.
- **Manufacturer:** The company that manufactures the chemical product.

Chemicals of High Concern (CoHCs): are chemicals that meet any of the following criteria: 1) carcinogenic, mutagenic, or toxic to reproduction (CMR); 2) persistent, bioaccumulative and toxic substance (PBT); 3) any other chemical for which there is scientific evidence of probable serious effects to human health or the environment that give rise to an equivalent level of concern (for example, an endocrine disruptor or neurotoxicant); or 4) a chemical whose breakdown products result in a CoHC that meets any of the above criteria.

Chemicals Policy: A statement of how a company manages chemicals in its materials, supply chains, products, and operations beyond what is required by regulation.

Chemicals in Products: Refers to chemicals that are intended or anticipated to be part of the finished product. Examples include dyes, silicone finishes, screen printing, inks, labels, a durable water repellent chemical formulation, or a chemical plasticizer added to a plastic product or component.

Chemical Footprint is the total mass of chemicals of high concern (CoHCs) in products sold by a company, used in its manufacturing operations its facilities and by its suppliers, and contained in packaging.

Chemical footprinting is the process of assessing progress toward the use of safer chemicals and away from chemicals of high concern to human health or the environment.

The Chemical Footprint Project Survey evaluates responders' chemicals management systems against best practice to measure and reduce chemical footprints.

Endocrine Disruptors: Substances of very high concern that mimic or inhibit the effects of hormones. Many of these substances are also CMRs.

Formulated Product: A preparation or mixture of chemical substances that can be gaseous, liquid, or solid (e.g., paints, liquid cleaning products, adhesives, coatings, cosmetics, detergents, dyes, inks, and lubricants). Note it can be an intermediate product sold to another formulator, fabricator, or distributor or final product sold to a consumer or retailer.

GreenScreen List Translator™ (GSLT): An abbreviated version of the full GreenScreen method that can be automated. It is based on the hazard lists that inform the GreenScreen method. The GreenScreen List

Translator maps authoritative and screening hazard lists, including GHS country classifications, to GreenScreen hazard classifications. The GreenScreen List Translator can be accessed through [Pharos](#) or [Toxnot](#).

Hazard (chemical): Inherent property of a substance having the potential to cause adverse effects when an organism, system, or population is exposed, based on its chemical or physical characteristics.

Hazard Assessment: The process of determining under what exposure conditions (e.g., substance amount, frequency and route of exposure) a substance can cause adverse effects in a living system. Toxicology studies are used to identify the potential hazards of a substance by a specific exposure route (e.g., oral, dermal, inhalation) and the dose (amount) of substance required to cause an adverse effect.

Persistence: Attribute of a substance that describes the length of time that the substance remains in a particular environment before it is physically removed or chemically or biologically transformed.

Persistent, Bioaccumulative and Toxic (PBT): Chemical that is toxic, persists in the environment and bioaccumulates in food chains and, thus, poses risks to human health and ecosystems.

Restricted Substances List (RSL): A list of chemicals restricted by a company in products, parts, or components from its suppliers. A RSL may include only chemicals that are currently restricted by regulation. It may also include chemicals that are not yet legally restricted but have been identified as being of concern because of scientific evidence that they may cause harm to human health or the environment.

Safer Chemical: A chemical that, due to its inherent chemical and physical properties, exhibits a lower propensity to persist in the environment, accumulate in organisms and induce adverse effects in humans or animals.

Safer Alternative: A chemical, material, product, process or technology that is less hazardous for humans and the environment than the existing approach.

SIN List. 'Substitute It Now' list from [Chemsec](#) consists of chemicals that have been identified by ChemSec as being Substances of Very High Concern, based on the criteria defined within REACH, the EU chemicals legislation. The SIN List is implemented in many corporate chemicals management policies, third-party verification labels and procurement requirements including the Dow Jones Sustainability Index product stewardship criterion.

Supplier: Any actor in the supply chain that provides intermediate and/or final products and/or supporting services to brands and/or retailers. This includes: materials, assembly, and finished product suppliers.

Tier 1 Supplier: A manufacturer who provides products directly to a company without dealing with a middleman or other manufacturers.

Watch List: A list of chemicals of concern that a company does not currently prohibit, but is considering prohibiting in the future due to scientific evidence that a chemical may cause harm to human health or the environment.

APPENDIX A

Chemical Hazard List Resources

Examples of chemical hazard lists include:

Government

- The [REACH Candidate List of Substances of Very High Concern \(SVHCs\)](#) includes chemicals being considered for restriction in the European Union (EU). If a chemical is restricted, businesses must apply for and receive authorization to continue its use. The Candidate List is important for retailers in the EU who are required to divulge – within 45 days - the presence of any SVHCs present in an article over 0.1% by weight.
- The [REACH Authorization List](#) includes chemicals included in Annex XIV of REACH, the European Union’s comprehensive chemicals regulation. Use of chemicals on this list is restricted unless authorized in the European Union.
- The [EU Restriction of Hazardous Substances \(RoHS\)](#) restricts the use of hazardous chemicals in electrical and electronic equipment.
- The [Washington State Chemicals of High Concern to Children Reporting List](#) includes chemicals that manufacturers must report to the Department of Ecology when used in children’s products sold in the state.
- The [California Safer Consumer Products Candidate Chemicals List](#) is an informational list of chemicals that exhibit a “hazard trait and/or an environmental or toxicological endpoint” and are either found on one or more specified authoritative lists of hazardous chemicals or identified by the California Department of Toxic Substances Control as meeting specified criteria.

Sectoral Organizations

- The [Beauty and Personal Care Sustainability Project \(BPC\)](#): defines their [stewardship list](#) of chemicals of concern from a combination of international chemical hazard lists.
- The [American Apparel and Footwear Association Restricted Substances List \(RSL\)](#) includes materials, chemicals, and substances that are restricted or banned in finished home textile, apparel, and footwear products because of a regulation or law. In each case, the RSL identifies the most restrictive regulation. The list is updated annually.
- AFIRM has developed a [Restricted Substances Guidance](#) for the apparel and footwear supply chain. The RSL Guidance is a review of all AFIRM brand RSLs, and is updated regularly. It creates a compilation of commonly defined pairs of "lowest limit" plus corresponding "most suitable test method" established by and prevalent in AFIRM member companies. Individual brand RSLs may differ in specific parameters. The Guidance is available in nine languages.
- The [Zero Discharge of Hazardous Chemicals \(ZDHC\) Manufacturing Restricted Substance List \(MRSL\)](#) is a list of chemicals to be avoided in the apparel supply chain. ZDHC is an NGO formed by apparel and footwear brands and retailers to support the industry substituting CoHCs with safer alternatives. Over 150 companies have adopted the ZDHC MRSL.

NGOs

- [Safer Chemicals, Healthy Families](#) has a useful series of [fact sheets](#) on key CoHCs which draw from the leading peer-reviewed science and are of direct relevance to retailers as well as a list of '[Hazardous One Hundred](#)' chemicals for retailers to get started. The '[Mind the Store](#)' [campaign](#) is an excellent resource to track emerging chemicals of concern and how retailers are responding.
- The [SIN list](#) of over 900 chemicals was compiled and is maintained by ChemSec, a European NGO. The SIN database lists chemicals that meet the REACH criteria for chemicals of high concern but which may or may not be regulated. . The SIN list was created to help businesses proactively identify chemicals of concern as part of their chemicals management.
- Clean Production Action developed [GreenScreen® List Translator](#), a list-based hazard screening method, to enable users to quickly identify known CoHCs. It does this by evaluating chemicals based on information from over 40 hazard lists and then “translates” this information into a score indicating whether a given chemical is a “CoHC” as defined by GreenScreen® for Safer Chemicals. It is available in an automated framework (see below for details). [Trainings](#) on how to use the List Translator are available.
- The Chemical Footprint Project's [CoHC list](#) includes over 2,200 chemicals, which were identified using GreenScreen List Translator.

List-based Chemical Hazard Assessment Tools

[Pharos](#)

Pharos provides resources to assess human and environmental health hazards of chemicals plus tools to collaborate to find safer alternatives. It incorporates the GreenScreen List Translator plus the following data sources:

- Hazard listings - Associations between chemicals and specific human and environmental health endpoints identified by governmental and professional authorities.
- Restricted substance lists (RSLs) - Listings of chemicals whose use is restricted and/or managed by regulatory or corporate policy or subject to voluntary program guidance.
- Hazard assessments - Toxicological assessments using the GreenScreen™ protocol that benchmarks the inherent hazards of chemicals across a broad range of health endpoints. Pharos contains a comprehensive list of all GreenScreen assessments published for public use.
- Identification - Approximately 50,000 chemicals are listed in Pharos, searchable by over 150,000 CASRNs and synonyms utilizing the NIH PubChem database.
- Physical properties - chemical formulas and some key physical data are drawn from the NIH PubChem database.
- Compound groups - Pharos is the home of the Chemical Class Population Project which creates structural or other definitions for the chemical compound groups referenced by authoritative hazard lists.

Toxnot

Toxnot is a chemicals management and hazard assessment platform that has incorporated GreenScreen Chemical Hazard Assessments and GreenScreen List Translator into its suite of tools. Retailers can understand product and supply chain hazards at no cost. Other offerings include platforms that allow brands, customers, and suppliers to collaborate on chemicals transparency both through an open exchange of data and by pooled funding of chemical hazard assessments. Toxnot also provides a robust commercial toolset that allows companies to apply chemicals hazard assessment in their products and chemical inventories as well as providing support for reporting and compliance initiatives.



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