

# CHEMICALS MANAGEMENT 101

## CHEMICALS OF CONCERN

### OVERVIEW

Chemicals are the basic building blocks of all materials and products. They may be used to facilitate manufacturing processes or intended to be part of finished products to provide an aesthetic or performance benefit. When a chemical is identified as hazardous to human health and/or the environment through credible scientific evidence, it may be considered a **'chemical of concern.'** The hazard properties that are used to identify a 'chemical of concern' include:

- Carcinogenicity (cancer-causing),
- Mutagenicity (ability to mutate DNA),
- Reproductive toxicity (ability to interfere with reproduction or fertility),
- Persistence in the environment (inability to breakdown under natural conditions), and
- Bioaccumulation (ability to accumulate in living tissue).

Many chemicals of concern are regulated or under consideration for regulation in the future. Beyond regulatory compliance, understanding the chemicals used to create your products, identifying possible chemicals of concern and proactively substituting safer alternatives are important processes for ensuring the health of customers, workers, communities and the environment.

Several chemicals and chemical classes are commonly recognized as chemicals of concern relevant to the materials used in outdoor industry products, such as Bisphenol A (BPA) in plastics and inks; long chain Per- and Polyfluoroalkyl substances (PFASs) in durable water repellents; and certain flame retardant (FR) chemicals, such as polybrominated diphenyl ethers (PBDEs).

The following checklist provides steps to get started identifying chemicals of concern and pursuing alternatives for your organization. These steps will help you engage with your supply chain to better understand and know what is used to make your products.

### FOUNDATIONAL ACTIONS: CHECKLIST

- Gather information about the materials and manufacturing processes used to create your products and packaging, including which chemical substances are used throughout the product creation process.
  - Refer to your bill of materials (BOM), and you may need to request and compile additional information from various sources such as your internal teams, suppliers, or industry resources like the *Higg Index Material Sustainability Index (MSI)*.
- Cross-reference the information gathered in the previous step with the Restricted Substances List (RSL) adopted by your organization.
  - An RSL should meet or exceed global regulatory requirements, as outlined in *OIA's Chemicals Management one-pager*. Cross-referencing the RSL will help you identify which substances used in the product creation process should be prioritized for substitution.
  - Reference additional industry guidance on where high-risk chemical substances are commonly found based on material type, such as *Table 1 in OIA's Getting Started Guide for Brands in Chemicals Management*, or other sources that identify potential substances of concern.
- Ask if your suppliers are using tools to manage chemicals – such as bluesign, OEKO-Tex, ZDHC MRSL, ToxFMD, or other widely-adopted industry resources.
  - This is an effective approach to establish some level of assurance for the absence of globally recognized chemicals of concern without the need for additional or adhoc testing.
  - For materials that are unverified and high-risk to your business, consider conducting select chemical testing through an accredited third-party laboratory to verify they do not contain known chemicals of concern relevant to specific material types.
- If a chemical is prioritized for substitution, connect with key stakeholders such as your product and materials teams, chemical formulators and suppliers to understand where and why chemicals of concern are being used.
  - If the chemical is being spec'd directly or indirectly through use of a specific material or finish, consider reevaluating the product specifications and investigating alternative options to achieve the appropriate level of performance.
- To seek suitable replacement chemicals for your material, finish or manufacturing process, begin working with your suppliers to understand existing alternatives.
  - Ensure your suppliers are screening existing chemistry in an appropriate way – such as conforming to the Zero Discharge of Hazardous Chemicals (ZDHC) Manufacturing Restricted Substances List (MRSL). Determine the level of assurance you are comfortable with using the *ZDHC MRSL pyramid* as a guide.

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- If challenged to identify or adopt existing alternatives, get involved in an industry group focused on supporting best practices for the outdoor industry, such as *OIA's Chemicals Management Community of Practice*.
  - If suitable alternatives do not currently exist, consider leveraging a third-party organization with extensive chemical knowledge such as *GreenScreen* to conduct an Alternatives Assessment (this is an advanced practice). Expert knowledge is critical in this process to avoid making a regrettable substitution for a chemical with additional hazards. Consider assessing the replacement substance against criteria such as availability, hazard, cost, performance, and other priorities relevant to your organization
- Explore opportunities to continuously elevate your chemicals management practices by reviewing *OIA's Getting Started Guide for Brands in Chemicals Management*, utilizing the OIA Sustainability Bootcamps, or partnering with another credible sustainability consulting firm.
  - For more information about the upcoming OIA Sustainability Bootcamps, please email [sustainability@outdoorindustry.org](mailto:sustainability@outdoorindustry.org).

## KEY RESOURCES

<p><b>For additional guidance on substituting chemicals, visit:</b></p>	<p><b>OIA Getting Started Guide for Brands in Chemicals Management:</b> <a href="https://outdoorindustry.org/sustainable-business/chemicals-management/">https://outdoorindustry.org/sustainable-business/chemicals-management/</a>  <b>ZDHC MRSL &amp; Conformity Guidance:</b> <a href="https://www.roadmaptozero.com/programme/manufacturing-restricted-substances-list-mrsl-conformity-guidance/">https://www.roadmaptozero.com/programme/manufacturing-restricted-substances-list-mrsl-conformity-guidance/</a>  <b>Greenscreen® method for hazard assessment:</b> <a href="https://www.greenscreenchemicals.org/method">https://www.greenscreenchemicals.org/method</a>  <b>OECD Substitution and Alternatives Assessment Toolkit:</b> <a href="http://www.oecdsaatoolbox.org/">http://www.oecdsaatoolbox.org/</a></p>
<p><b>To learn more about chemicals of concern in the outdoor industry, visit:</b></p>	<p><b>The following resources the OIA Chemicals Management Toolkit:</b> <a href="https://outdoorindustry.org/sustainable-business/chemicals-management/">https://outdoorindustry.org/sustainable-business/chemicals-management/</a></p> <ul style="list-style-type: none"> <li>• Intro to OIA's Chemicals Management Community of Practice</li> <li>• Durable Water Repellent (DWR) Toolkit</li> <li>• Flame Retardants (FR) Toolkit</li> </ul>