Chemical Management Guide
&
Restricted Substances List (RSL)

Updated: October 2024

Contents

Introduction

REI was founded by 23 climbing friends who believed that a life outdoors is a life well lived. From those origins, we know that great things can happen when people join together in pursuit of a common purpose.

Today, our community has grown to over 24 million members who trust REI as their source for reliable gear that aligns with their values. To honor this legacy of trust, we are committed to partnering with supply chain partners to deliver safe, high quality products in a manner that protects consumers, workers, and the environment.

We recognize the essential role that chemistry plays in the creation of durable, high-performance products. Thus, REI's strives to use the most benign and well-understood chemical inputs that are managed responsibly throughout the product creation process. The REI Chemical Management Guide (referred to as *the Guide* hereafter) and Restricted Substances List (RSL) define our expectations and identify resources to enable responsible chemical management practices.

To strengthen our commitment to responsible chemical management practices, REI is a proud partner of the bluesign® system. The core principles of the Guide and RSL are aligned with bluesign® to help standardize chemical management expectations for our business partners.

All vendors, licensees, and suppliers of finished goods and materials to REI's Co-op Brand and Co-op Cycles (all referred to as *Suppliers* hereafter) are required to meet the expectations detailed in this Guide and RSL as a prerequisite of doing business with REI.

The updated expectations of this version must be implemented by January 1, 2025.

The most recent version of the RSL is maintained on the REI website at https://www.rei.com/dam/rei-chemical-management-guide-and-rsl.pdf

Thank you for your continuing partnership and your cooperation in ensuring that REI Co-op and Co-op Cycles products meet the high expectations of our Co-op members.

Sincerely,

Cathy Nielsen
Divisional Vice President of
Operations, REI Co-op Brands

Mandy Lam
Global Head of Supplier Sustainability

We inspire, educate and outfit for a lifetime of outdoor adventure and stewardship.

Chemical Management Overview

From water to complex processing agents, over 8,000 chemicals are used globally for apparel and footwear production. With this inherent dependence on chemistry, REI recognizes our responsibility to work with suppliers to understand the chemistry involved in manufacturing and to select the most effective and safe chemicals.

Some chemicals have known hazardous properties. Others have little or no available data to inform users of potential hazards. Thus, our approach to chemical management is rooted in transparency and partnership with suppliers, non-profits, industry partners, and trade organizations to learn about the chemistry involved in every aspect of manufacturing. To control hazards, our goal is to identify chemicals of concern and replace them with better alternatives where they exist. Where alternatives do not exist, we seek out new opportunities for innovation to fill the void. We believe this level of understanding and intentional selection is critical for preventing consumer, worker, and environmental exposure to hazardous substances.

We also view chemistry as a unique opportunity for creating positive change. Chemistry can unlock new levels of manufacturing efficiency, material quality and product performance. Our ambition to adopt *green chemistry* innovations plays a growing role in how we design products and partner with existing and new suppliers. This aspiration is aligned with the Co-op's broader initiatives to continuously reduce our overall footprint.

We recognize that achieving our chemical management goals is a journey of incremental progress, exploration and collaboration. In many cases, the data and chemical alternatives needed to achieve our vision do not yet exist. As such, REI is committed to making continuous progress and sharing our learnings broadly with members, suppliers and industry partners.

In the spirit of partnership beyond our business, the content of this Guide and RSL is heavily aligned with industry tools and existing resources to promote convergence towards a common set of objectives for chemical management. We will continue to update this guide and our chemical management program as new data and tools are available.

Contact Information

If you have questions, comments or would like support in meeting the expectations outlined in this Guide and RSL, please contact ProductSustainablility@rei.com.

Attention: Ms. Hue Pham
Program Lead,
Supply Chain Sustainability

Supplier Responsibilities

REI's policy for chemicals management includes the following supplier responsibilities. Complying with this policy by adhering with these responsibilities is a prerequisite of doing business with REI.

- Review the REI Guide & RSL annually[1];
- Adhere to all applicable legal requirements, regardless of whether those requirements are captured in this document;
- Develop a Chemical Management System (CMS) which includes an independent process for ensuring compliance with this Guide & RSL and all legal requirements;
- Inform material suppliers and sub-contractors of relevant requirements and expectations
- Maintain and regularly update a chemical inventory and a valid chemical Safety Data Sheet (SDS) for each processing chemical stored and used on-site;
- Clearly post information about hazards associated with each chemical and chemical formulation in storage and use areas;
- Provide staff with appropriate training and protective equipment to prevent chemical exposure;
- Upon request, provide REI with existing compliance documentation or laboratory test results within three working days of receiving the request;
- Upon request, disclose the identity and use of each chemical used in materials for REI;
- Upon request, disclose the contact information for upstream suppliers and sub-contractors used to make REI materials and products;
- Complete and return Addendum 2: RSL *Acknowledgement of Receipt and Understanding* and Addendum 3: Material Supplier Survey as requested by REI as confirmation of accepting these terms; and
- Notify REI immediately if any materials or products cannot meet the requirements of the RSL using Addendum 4: RSL Failure Remediation Form.

RSL Testing: Material, component, and product testing may be required by REI at any stage of manufacturing to demonstrate compliance with the requirements of this document. Testing may be random or part of REI's seasonal RSL testing program, and would be conducted at REI's expense, unless the testing is in direct response to an identified RSL or regulatory compliance violation, in which case, the testing will be at the supplier's expense.

Existing Test Reports: If a material requested for RSL testing has been tested in the past year, you may provide the applicable test report to REI for review. REI will determine and advise whether the report can be accepted in lieu of additional testing.

Transparency: Suppliers shall allow an authorized representative of REI to inspect the manufacturing facility where REI products or raw materials are developed, manufactured, or stored. Visits would be conducted during normal business hours.

REI reserves the right to cancel relevant orders if the Supplier fails to meet any of these requirements.

[1] https://www.rei.com/dam/rei-chemical-management-guide-and-rsl.pdf

Priority Chemicals of Concern

REI continuously examines the chemicals used in our supply chain and prioritizes potentially hazardous substances for elimination or replacement where safer, effective alternatives exist. The following is an overview of the chemicals and chemical classes that REI has identified as top priority for elimination or replacement:

Antimicrobials & biocides: Odor management in textiles and foams is commonly achieved by application of antimicrobial and biocidal finishes. The health and environmental impacts of many these finishes are not thoroughly understood. We are selective in our application of odor control finishes and use only bluesign® certified options to ensure treatments have undergone evaluation for toxicity and efficacy.

Flame retardant (FR) chemicals: FR chemicals are used to comply with flammability requirements. Certain FR chemicals introduce hazards to people and the environment. We are committed to eliminating FR chemicals where they are unnecessary and partnering with standard setting organizations and regulators to reform outdated flammability requirements. Where FR chemicals are demonstrated to be required to achieve regulatory compliance, we work with our suppliers to select the best alternatives.

Per- and Polyfluoroalkyl Substances (PFAS): For many years, PFAS-based chemistry has been used in DWR finishes for performance textiles and other applications, due to its durability and performance benefits. REI has been working to address the use of these chemicals via our chemical management program and the initial expectations established in our Product Impact Standards, which address the use of certain types of PFAS in key product categories.

Due to the changing regulatory landscape, shifts in consumer preferences, and increased availability of alternative technologies, REI is transitioning away from PFAS. In addition, bluesign® is in the process of phasing out PFAS from the bluesign® System.

As a result, REI has also developed an updated test plan that directly addresses PFAS. Suppliers may contact REI for a copy of the test plan if they plan to conduct their own compliance checks during product development or redevelopment stages under their CMS (chemical management system).

In parallel, REI will continue to avoid the application of water repellent chemicals where they are not needed to provide a performance benefit, and we continue to pursue PFAS-free alternatives for apparel and gear. Suppliers are responsible for complying with our requirements.

Polyvinyl chloride (PVC): PVC is prohibited from use in REI Co-op Brand apparel and gear products due to high potential for hazardous impacts during product manufacturing and use. PVC is prohibited in Co-op Cycles products as well, with an exception for certain bicycle subcomponents, where durable alternatives are yet to be discovered.

Solvents of high concern: Solvents are a diverse group of chemicals with many uses throughout manufacturing, from equipment cleaning to textile lamination. Certain solvents are classified as

carcinogenic, mutagenic and reprotoxic (CMR). REI is working with our suppliers to review, limit, and phase out CMR solvents. To support our goal to eliminate CMR solvents, REI is pursuing water-based coatings, alternative cleaning agents for equipment and material preparation, and training of factory workers around proper chemical selection, handling, and disposal.

Suppliers can find preferred, RSL compliant chemicals through the bluesign FINDER® chemical database. This resource is open-sourced and available at www.bluesign.com/en/business/finder.

Contact REI at ProductSustainability@rei.com if you have questions about the priority chemicals listed above, accessing the bluesign FINDER®, or assessing alternative chemicals for manufacturing.

RSL Requirement for Co-op Cycles

Priority chemicals of concern for Co-op Cycles

The following chemicals are of particular concern in the materials used to make bicycles. As a result, REI has elevated expectations for how these chemicals are managed in the manufacturing of the bicycles sold under REI's Co-op Cycles brand. Products containing these chemicals are regulated in some or all U.S. states (see part). Notify REI immediately if a component is known or suspected to contain any of the following substances:

- Lead- Lead is a powerful toxin to the brain and nervous system. Cast metals and brass have a higher risk of containing lead. REI will only accept "low lead", or NO lead metal options.
- Other heavy metals (cadmium, nickel, chromium, mercury, etc.)- Metal parts and coatings may contain heavy metals that pose health risks to workers, product users and the environment.
- Phthalates (plasticizers)- Certain phthalates, also referred to as *plasticizers* because of their use to make plastics more flexible, have negative effects on the reproductive system. Plastic components should be tested for phthalates. PVC should be avoided whenever possible.
- BPA (Bisphenol A)- Plastic components should be tested for BPA, which should not be intentionally used in manufacturing of products.

Children's bicycle requirements

- CPSIA- REI requires that children's products be tested for CPSIA compliance prior to shipment in accordance with U.S. federal law. Refer to the REI CPSIA manual for more information. Products that fail CPSIA testing cannot be imported to the U.S.
- Lead- Every coating, part and finished children's product must contain less than 90 ppm total lead. Children's products containing equal or more than 90 ppm lead will be rejected.
- Phthalates- All children's toys components (e.g. balance bike) must contain less than 50 ppm.
- BPA(Bisphenol A)- Plastic components should be tested for BPA, which should not be intentionally used in manufacturing of products.

Chemical testing program

REI will continue requesting CPSIA and RSL testing on Co-op Bicycles components and products. Chemical test results will only be accepted if performed by an ISO/IEC 17025 accredited laboratory. CPSIA testing for children's products must be conducted in a CPSC Approved Laboratory.

Contact REI at ProductSustainability@rei.com if you have questions about the requirement above.

Tools & Resources

REI's approach to adopting more sustainable chemical management practices is closely connected with a growing set of industry tools. These resources provide REI staff and our Suppliers with information and guidance for preventing exposure to chemical substances of concern, ensuring compliance with US and international regulations, and aligning with global chemical management best practices.

bluesign® technologies AG

bluesign®, [2] provides a comprehensive system for managing chemistry, water, energy, and emissions during textile production. We believe bluesign® is the best available approach for meeting REI's chemical management goals.

While the bluesign® system is optimized for textile and apparel production, the system's approach to product stewardship is appropriate for any product manufacturing site, and the content of the bluesign® RSL is relevant of all finished materials currently used in REI Co-op and Co-op Cycles products. Thus, REI has aligned our approach to chemical management and our RSL with the bluesign® system as closely as possible.

bluesign® FINDER

bluesign® provides a list of approved chemicals that have been reviewed for hazards to people and the environment and exposure potential during manufacturing. This database of chemicals, the bluesign® FINDER[3], is now publicly available to support selection of RSL and legally compliant chemistry for material and product manufacturing.

Suppliers of REI are encouraged to gain access to the bluesign® FINDER and use it as a primary tool in selecting chemistry that meets the strictest global compliance and best practice expectations for sustainable manufacturing. All chemicals in the FINDER are compliant with REI's RSL requirements and chemical management goals. Visit the bluesign® FINDER web page to learn more and gain access.

Globally Harmonized System for Classification and Labeling of Chemicals (GHS)

GHS is an internationally agreed upon system for classifying, documenting, and communicating chemical hazards. Guidance on GHS and documentation standards in different countries can be found on the United Nations website[4].

[2] https://www.bluesign.com/en
[3] https://bluesignfinder.com/
[4] http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html

Chemical Safety Data Sheet (SDS)

A chemical safety data sheet (SDS) must be maintained for each processing chemical present at a Supplier's facilities. To meet GHS standards, each SDS must be dated from the past three (3) years and contain sixteen (16) sections of information, including chemical name, composition, hazard identification, first aid measures, and handling and storage.

Examples of valid SDS documents in English, Chinese, and Vietnamese can be found in the OIA Chemical Management Guide & Training, referenced above, or by request.

Chemical Inventory List (CIL)

Suppliers must maintain a CIL that includes all processing chemicals present on-site. A factory's CIL should be maintained by a designated person and be updated at least once every three (3) months. At a minimum, the CIL should include the following information for each chemical kept on site:

1. Chemical product name;
2. Date of receipt and Expiration date
3. Chemical supplier (name, location, contact person);
4. Primary use (e.g., dye, flame retardant);
5. Chemical ingredients (names, CAS numbers, percentage contents);
6. Quantity on site; and
7. bluesign® certification number, if applicable.

Guidance on creating a chemical inventory management process and a downloadable CIL template can be found in the OIA Chemical Management Guide & Training for Manufacturers, referenced above. Alternative strategies for documenting chemicals should be discussed with REI to ensure standards are met.

Higg Index Facility Environmental Module (FEM)

The Higg Index FEM, an industry tool administered by Cascale[5], measures the environmental impacts of manufacturing and identify areas for improvement. REI is currently using the Facility Environmental Module (FEM) to better understand REI's supply chain impacts, including chemical use and management.

Regulatory Requirements

Suppliers of materials, components, products, and packaging to REI must adhere to all applicable legal requirements, regardless of whether those requirements are captured in this document.

[5] Higg FEM – User Resources: How To Higg

California Proposition 65

The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), requires manufacturers and businesses to label products that contain one or more substance(s) known to the state of California to cause cancer, birth defects, or other reproductive harm. Consumers may initiate legal action against a manufacturer or business that fails to provide such warning.

The Proposition 65 list of chemicals requiring product labeling can be found at on the California Office of Environmental Health Hazard Assessment Website[6]. Suppliers must inform REI if any of the chemicals on this list are intentionally added to or may be present as contaminants in REI products or product components.

Consumer Product Safety Improvement Act

The US Consumer Product Safety Improvement Act (CPSIA) requires manufacturers of certain domestic and imported products to test and certify compliance with applicable safety requirements.

For all REI Co-op and Co-op Cycles children's products, Suppliers are responsible for:

1. Ensuring that all materials, components, trims, and finished products are compliant with CPSIA;
2. Testing at a CPSC accredited laboratory;
3. Supplying Children's Product Certificate (CPC) for each production lot; and
4. Providing tracking labels for each production lot.

REI's specific CPSIA requirements can be reviewed in our CPSIA manual on the REI Partners Site[7] or by request. Visit the US Consumer Product Safety Commission website[8] for more information.

State Chemical Reporting Regulations

Maine[9], Oregon[10], Vermont[11], and Washington[12] require manufacturers or importers of goods to notify relevant authorities of the presence of certain chemicals in children's products. Suppliers must inform REI if any of the chemicals in these state level lists are intentionally added to or may be present as contaminants in REI products or product components. Due to the changing regulatory landscape in this area, Suppliers are required to stay up-to-date on recent state chemical reporting regulations that may not be listed here.

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[6] http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html
[7] http://partners2.rei.com
[8] https://www.cpsc.gov/Regulations-Laws--Standards/Statutes/The-Consumer-Product-Safety-Improvement-Act/
[9] https://www.maine.gov/dep/safechem/childrens-products/index.html
[10] www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/HEALTHYNEIGHBORHOODS/TOXICSUBSTANCES/Pages/Toxic-Free-Kids.aspx
[11] www.healthvermont.gov/environment/children/chemical-disclosure-program-childrens-products-manufacturers
[12] www.ecy.wa.gov/programs/swfa/cspa/chcc.html

Restricted Substances List (RSL)

REI has adopted the bluesign® system RSL. The bluesign® RSL is a subset of testable substances extracted from the bluesign® System Substances List ("BSSL") that are relevant for finished materials, products and packaging. The BSSL (see link below) is a larger, comprehensive list that includes all global substance restrictions beyond finished products. All REI Co-op Brand suppliers must comply with the RSL for finished products. We also encourage all suppliers to comply with the BSSL.

Definitions

- **Accessory:** A component of a consumer product which is not classified as textile fabric (e.g. button, label, zipper, etc.)

- **Article:** An object which during production is given a special shape, surface or design, that determines its function to a greater degree than does its chemical composition (fibers, textile fabrics, buttons, zippers, etc.).

- **BSSL:** bluesign® system substances list (BSSL).[13] consumer safety limits. A list that specifies consumer safety limits for chemical substances in articles. It also defines usage bans for chemical substances prohibited from the manufacturing of articles.

- **CAS Number:** CAS registry numbers are unique numerical identifiers for chemical elements, compounds, polymers, biological sequences, mixtures and alloys. Chemical Abstracts Service (CAS), a division of the American Chemical Society, assigns these identifiers to every chemical that has been described in the literature. The intention is to make database searches more convenient, as chemicals often have many names. Almost all molecule databases today allow searching by CAS number.

- **Chemical substance:** A chemical element and its compounds with constant composition and properties. It is defined by the CAS number.

- **Component:** A part of an article that can be distinguished according to the material composition, the functionality and/or the color and can easily be mechanically separated from the other components.

- **Limit value:** Limit values are defined for single substances or substance groups. The limit value is the maximum amount of a chemical substance or substance group permitted in articles for the usage ranges A, B and C.

- **Detection limit (DL) :** The lowest quantity of a substance that can be distinguished from the absence of that substance with a stated confidence level.

[13] https://www.bluesign.com/en/business/downloads

- **Member:** This term describes a member of a group of restricted substances. It can be a chemical substance or a subgroup of substances. See also **Substance groups.**

- **Mixture:** A chemical product composed of two or more substances. It can be, for example, a colorant or an auxiliary.

- **Monitoring:** For some chemical substances toxicological and/or ecological properties are not yet well defined. Therefore, the risk assessment is not complete. For some substances sufficient information on possible/typical contamination of articles and chemical products is not available now. Those substances are under observation. Exact restrictions will be defined as soon as more information exists. In cases where monitoring status is accompanied by a limit value, the limit value should be the goal.

- **Sector of Use:** Bluesign® ASSESSMENT for chemical products defines sector of use categories. bluesign® uses an approach similar to REACH for the risk-based evaluation of chemical substances and transfers this to the evaluation of chemical products. This allows a product, process and industry specific assessment of risks to human and the environment, that can be adapted to all kind of industries. Some sectors of use are combined into groups as shown in the following table:

Sector of Use Group	Sector of Use
Textiles	Fibers/yarns
	Textile articles including fabrics, laminates and non-wovens
	Garments and other finished textile articles
Down/feather	Down and feather articles
Leather	Leather articles
Polymer parts	Plastic articles
	Rubber articles
Metal parts	Basic metals, including alloys
	Fabricated metal articles

- **Several:** When a substance group is not defined by a single CAS number, the field CAS Number contains the entry “Several”. In case of a restriction of the whole substance group this is reflected by a limit entry for the group or a corresponding comment. For substance groups, especially for large groups, some or all members are listed in the annex. When group members are listed in the annex, this is indicated in the comment for the group.

- **Substance groups:** For better readability and to show the hierarchy of substance groups the RSL lists:

    - Main substance group (**bold, normal letter**)
    - Substance group (**bold, *italic letter***)
    - Substance subgroup (*italic letter*)
    - Single substances (normal letter)

- **Usage ban:** For several chemical substances or substance groups a usage ban is defined. For these substances or substance groups intentional use in manufacturing of articles is prohibited. That means that chemical products (e.g. colorants or textile auxiliaries) used for manufacturing of articles must not intentionally contain these substances or substance groups.
  The aim of a usage ban is to avoid release of harmful substances to the environment and to avoid occurrence in the manufactured article by applying the precautionary principle.
  The REI manufacturing restricted substances list (MRSL) is composed of substances that are marked for "usage ban".

- **Usage range:** Usage ranges classify consumer goods according to their consumer safety relevance. Three usage ranges (A, B, C) are defined, with A being the most stringent category concerning limit values/bans:
  - Usage Range A: Next to skin use and baby articles (0 to 3 years)
  - Usage Range B: Occasional skin contact
  - Usage Range C: No skin contact

Testing methods

Restricted Substances Table (refer to link) contains a column that details the testing information for each restricted chemical or chemical class. This testing column consists of sample preparation, e.g. extraction, digestion, derivation and specific test method (i.e. the actual measurement).

Depending on the availability, international or national standards are also given for several substances and these methods may be applied. Other accredited methods can only be applied if it can be verified that equivalent results are obtained.

Details of the respective sample preparation methods can be found in the table below:

Sample preparation	Solvent(s)	Temperature (°C)	Time (min)	Other requirements
Extraction with KOH	Potassium hydroxide (1M)	90	12-15 hours	Derivatization with Acetic anhydride
Extraction with MeOH	Methanol	70	60	Ultrasonic bath
Extraction with THF	Tetrahydrofuran	40	60	
Extraction with DCM	Dichloromethane	40	60	Ultrasonic bath
Extraction with MTBE	Methyl tert-butyl ether	60	60	Ultrasonic bath
Extraction with water	Deionized water			
Extraction with MeOH/Acetonitrile	Methanol/Acetonitrile (1:1)	70	30	Ultrasonic bath
Extraction with Potassium carbonate solution	Potassium carbonate solution	Room temp.	60	Ultrasonic bath
Extraction with THF/Acetone	Tetrahydrofuran/Acetone	60	60	Ultrasonic bath, derivatization with Acetonitrile
Extraction with Acetone	Acetone	70	60	Ultrasonic bath
Extraction with Hexane/Dichloroethane	Hexane/Dichloroethane	70	60	
ASE - Accelerated Solvent Extraction	Acetone/Hexane (1:1)	100	-	
ASE – Accelerated Solvent Extraction	Ethyl acetate	40	-	

Soxhlet Extraction	Acetone/Hexane (1:1)	-	480	
Headspace	-	120	45	
DIN EN ISO 105-E04 (2013)	Acidic sweat solution	37	60	Textile to liquor ratio 1:50

Testing Matrix

The following matrix provides guidance on where restricted substances may occur based on material substrate. It is recommended that Suppliers use this matrix as a starting point for understanding what chemicals are of greatest concern for the materials supplied to REI.

Substances are grouped by chemical composition, functionality, or environmental impacts. Chemical groups are listed in **bold** and correspond with chemical groups in the Restricted Substances Table and Annex in the following section of this guide.

This table is aligned with the bluesign® Testing Matrix version 12.0 (July 01, 2022). Contact REI to receive recommendations for materials not explicitly included in this matrix or to view REI's RSL testing plans.

See the Restricted Substances Table and Annex for chemical or chemical group specific CAS numbers, limits, and testing methods.

Matrix Key:

- ● Testing strongly recommended
- ○ Testing recommended
- – Substances or group of substances with high probability not relevant

Test Item	Textiles from natural fibers	Textiles from synthetic fibers	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
pH Value	●	●	–	●	–	–
Aldehydes						
Formaldehyde	●	●	–	●	–	–
Alkylphenols and Alkylphenolethoxylates	●	●	–	●	○	–
Amines						
Aniline	○	○	–	○	–	–
Arylamines	●	●	–	●	–	–
Asbestos	–	–	–	–	–	–
Biocides						
Dimethylfumarate (required if the product is packaged with any form of anti-mold agent)	○	○	–	○	○	–
o-Phenylphenol and its salts	○	○	–	●	–	–
Chlorinated Benzenes and Toluenes	–	●	–	○	–	–
Chlorinated Phenols	●	●	–	●	–	–
Colorants						
with carcinogenic potential	●	●	–	●	–	–
with allergenic potential	○	●	–	○	–	–
banned for other reasons	●	●	–	●	–	–
Dioxins and Furans	–	–	–	–	–	–
Flame Retardants (Required if sample declared with functional finishing)	○	○	–	–	○	–
Chlorinated paraffins (all chain lengths)	–	–	–	●	–	–
Glycols	–	–	–	–	–	–
Halogenated Biphenyls, Terphenyls and Naphthalenes	○	○	–	○	○	–
Halogenated Diarylalkanes	○	○	–	–	○	–
Isocyanates (Required for PU and for relevant functional finishes)	○	○	**PU** ●	–	**PU** ●	–

Test Item	Textiles from natural fibers	Textiles from synthetic fibers	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
Metals (extractable)						
Antimony	–	**PES** ●	–	○	○	–
Arsenic	○	–	–	○	○	–
Cadmium	–	○	●	–	●	■
Chromium, total	**Wool** ● **Other** ○	**PA** ● **Other** ○	–	–	■	–
Chromium VI	○	○	–	●	○	–
Cobalt	○	○	–	○	○	–
Copper	○	○	–	○	○	–
Lead	●	●	–	●	●	■
Mercury	○	○	–	○	○	–
Nickel	○	○	–	○	○	–
Metals (total content)						
Total Lead	●	●	–	●	●	●
Total Cadmium	●	●	–	●	●	●
Metals (release)						
Nickel	–	–	–	–	–	●
Monomers						
Acrylamide	○	○	–	–	○	–
Other Chemical Substances						
2-Phenyl-2-propanol	–	–	–	–	**EVA** ●	–
Acetophenone	–	–	–	–	**EVA** ●	–
Azodicarbonamide (ADCA)	–	–	**Foam** ●	–	**Foam** ●	–
Benzyl chloride	–	○	–	–	–	–
Bisphenol A	○	○	–	–	●	–
Cresol, all isomers	○	○	–	○	–	–
Formamide	–	–	–	–	**EVA** ●	–
Isoquinoline	–	●	–	–	–	–
Phenol	–	–	–	○	○ (PU foam)	–
Quinoline	–	●	–	–	–	–
Siloxanes (D4, D5, D6)	●	●	–	●	●	–
Ozone Depleting Substances	–	–	–	–	–	–
Pesticides	○	–	–	○	–	–

Test Item	Textiles from natural fibers	Textiles from synthetic fibers	Additional testing for coated or printed textiles	Leather	Plastics and other synthetic materials (PU, PVC, Rubber, TPU, TPR, EVA, etc.)	Metal parts
Perfluoroalkyl sulfonic acids and derivatives - PFSA	○	○	–	○	–	–
Perfluoroalkyl carboxylic acids and derivatives - PFCA	○	○	–	○	–	–
Plasticizers	·	–	●	·	●	–
Polyaromatic Hydrocarbons (PAHs) incl. Benzo(a)pyrene	·	–	●	·	●	–
Polymers						
Polyvinylchloride (PVC)	–	–	●	–	●	–
Solvents						
1,2-Dichlorethane	–	–	–	–	–	–
Benzene	–	–	–	–	–	–
Dichloromethane	–	–	–	–	–	–
N,N-Dimethylacetamide (DMAc)	–	○	○	○	○	–
N,N-Dimethylformamide (DMF)	–	–	●	●	○	–
N-Ethyl-2-pyrrolidone (NEP)	○	○	–	○	○	–
N-Methylpyrrolidone (NMP)	○	○	–	○	○	–
Tetrachloroethylene	○	○	–	○	○	–
Toluene	–	–	●	●	●	–
Trichloroethylene	○	○	–	●	○	–
Xylene, all isomers	–	–	–	–	–	–
Tin Organic Compounds	○	○	●	●	●	–
UV stabilizer	–	–	**Coated** ○	–	○	–

REI RSL Testing Packages

Based on the material categories and types of treatments, REI RSL testing packages are created and defined by extracting the data from the bluesign® Testing Matrix and Restricted Substance table, which provides practical guidance on testing for different types of materials and treatments used in REI products. The following table summarizes all these recommended testing packages for supplier to refer and follow.

Chemical test results will only be accepted if performed by an ISO/IEC 17025 accredited laboratory.

See the Restricted Substances Table and Annex for chemical or chemical group specific CAS numbers, limits, and testing methods.

TEST ITEM *see Restricted Substances Table for more information including limit values, detection limits and test methods		Test Packages: material substrates							Test Packages: functional finishes				
		Natural Fibers	Synthetic Fibers	Natural and Synthetic blends	Plastics, thermo-plastics, and other polymers	Inks, Paints & Heat Transfers	Adhesive and Glue	Metal parts	Coated/ printed/ laminated	Flame Retardants	Total fluorine content	Water Repellants	Anti-microbial
		Cotton, Wool, Down, Hemp, Lyocell, Rayon, etc.	Polyester, Nylon, Spandex, etc.	Combinations of natural and synthetic fibers	EVA, PU, PE, TPU, foams, rubber, synthetic leather, and other plastics	Includes screen printing inks		Trims and bicycle components made of brass, alloy, zinc, etc.	finished textiles or finishing chemical	finished textiles or finishing chemical	finished textiles or finished chemical	finished textiles or finished chemical	finished textiles or finished chemical
Restricted Parameters													
pH Value		●	●	●									
Metals													
Extractable heavy metals	Antimony (extractable)	●	PES only ●	PES only ●									
	Arsenic (extractable)	●	●	●									
	Cadmium (extractable)	●	●	●									
	Chromium, total (extractable)	Wool only ●	●	●									
	Chromium VI (extractable)	●		●									
	Cobalt (extractable)	●	●	●									
	Copper (extractable)	●	●	●									●
	Lead (extractable)	●	●	●									

TEST ITEM *see Restricted Substances Table for more information including limit values, detection limits and test methods		Test Packages: material substrates							Test Packages: functional finishes				
		Natural Fibers	Synthetic Fibers	Natural and Synthetic blends	Plastics, thermo-plastics, and other polymers	Inks, Paints & Heat Transfers	Adhesive and Glue	Metal parts	Coated/ printed/ laminated	Flame Retardants	Total fluorine content	Water Repellants	Anti-microbial
		Cotton, Wool, Down, Hemp, Lyocell, Rayon, etc.	Polyester, Nylon, Spandex, etc.	Combinations of natural and synthetic fibers	EVA, PU, PE, TPU, foams, rubber, synthetic leather, and other plastics	Includes screen printing inks		Trims and bicycle components made of brass, alloy, zinc, etc.	finished textiles or finishing chemical	finished textiles or finishing chemical	finished textiles or finished chemical	finished textiles or finished chemical	finished textiles or finished chemical
Restricted Parameters													
	Nickel (extractable)	●	●	●									
Total Digestion	Cadmium (total digestion)	●	●	●	●	●	●	●					
	Lead (total digestion)	●	●	●	●	●	●	●					
Release	Nickel							●					
Other Chemicals													
Alkylphenols & Alkylphenol Ethoxylates ***(see Annex)***		●	●	●	●	●	●						
Arylamines ***(see Annex)***		●	●	●		Screen prints only ●							
Bisphenol A			Polyester + Spandex only ●		Polycarbonate and epoxy resin only ●								
Bisphenol S			●		●								
Chlorinated Aromatic Hydrocarbons ***(see Annex)***			PES only ●	PES only ●									
Chlorinated phenols (salts, esters and all isomers of MonoCP, DiCP, TriCP, TeCP, PCP)		●		●									●
Disperse Dyes			●	●									
Formaldehyde		●	●	●		●	●						
Flame Retardants ***(see Annex)***					PU foam only ●					●			
Total fluorine content											●		
Fluorinated Substances: [PFOA/PFOS)												●	

TEST ITEM *see Restricted Substances Table for more information including limit values, detection limits and test methods		Test Packages: material substrates							Test Packages: functional finishes				
		Natural Fibers	Synthetic Fibers	Natural and Synthetic blends	Plastics, thermo-plastics, and other polymers	Inks, Paints & Heat Transfers	Adhesive and Glue	Metal parts	Coated/ printed/ laminated	Flame Retardants	Total fluorine content	Water Repellants	Anti-microbial
		Cotton, Wool, Down, Hemp, Lyocell, Rayon, etc.	Polyester, Nylon, Spandex, etc.	Combinations of natural and synthetic fibers	EVA, PU, PE, TPU, foams, rubber, synthetic leather, and other plastics	Includes screen printing inks		Trims and bicycle components made of brass, alloy, zinc, etc.	finished textiles or finishing chemical	finished textiles or finishing chemical	finished textiles or finished chemical	finished textiles or finished chemical	finished textiles or finished chemical
Restricted Parameters													
Halogenated Biphenyls, Terphenyls and Naphthalenes ***(see Annex)***					●								
Isocyanates ***(see Annex)***					PU only ●				PU only ●				
Cresol, all isomers													
Plasticizer (phthalates); ***(see Annex)***					●	●							
Polycyclic Aromatic Hydrocarbons (PAHs); ***(see Annex)***					●	●			●				
Polyvinylchloride (PVC)					●	●							
Solvents (Organic)	Benzene						●		●				
	1,2Dichloroethane												
	Dichloromethane												
	N,NDimethylacetamide [DMAc]												
	Tetrachloroethylene												
	Toluene												
	Trichloroethylene												
	Xylene, all isomers												
	N,NDimethylformamide [DMF]								●				
Tin Organic Compounds (Organotins)					●	●	●		●				●
Sample Size/Weight Required per Testing Package for a material (textile, trim, etc.)		**40g / 7 X A3**	**50g / 9 X A3**	**52g / 9 X A3**	**52g / 9 X A3**	**40g / 7 X A3**	**37g / 7 X A3**	**2g / A4 + 4 pcs (for nickel release EN1811)**	**10g / 3 X A3**	**15g / 2 X A3**	**2g / A4**	**5g / A3**	**8g / 2 X A3**
Sample Size/Weight Required per Package for RAW CHEMICAL		**NA**	**NA**	**NA**	**52g / 9 X A3**	**40g / 7 X A3**	**37g / 7 X A3**	**NA**	**NA**	**15g / 2 X A3**	**2g / A4**	**5g / A3**	**8g / 2 X A3**

Consumer Safety Limits and Restricted Substances Table

The table below contains information on the substances or groups of substances prohibited or strictly limited in REI Co-op Brand and Co-op Cycles materials, products and packaging. Consistent with the testing matrix (bluesign®) above, substances in this table are grouped by chemical composition, functionality, or environmental impacts (e.g. ozone depleting substances), which is aligned with the Template bluesign® RESTRICTED SUBSTANCES LIST (RSL) Consumer safety limits, version 15.0.

For better readability and to show the hierarchy of substance groups the RSL lists:

- Main substance group (**bold, normal letter**)
- Substance group (**bold, *italic letter***)
- Substance subgroup (*italic letter*)
- Single substances (normal letter)

Consumer Safety Limits

Parameter	Limit	Test Method// Sample Preparation
pH	Non-leather products: 4.0 - 7.5	ISO 3071 (2020)
	Leather products: 3.2 - 4.5 (chrome tanned leather products) 3.5 – 7.9 (other leather products)	ISO 4045 (2018)
Odor	No unpleasant odor shall be emitted from the products.	SNV 195 651
Sensitizing Disperse Dyes	Disperse dyes (mainly used in PES dyeing) which are sensitizing and classified with the risk phrase H317 are not allowed for the usage range A	
Textiles Dyed with Disperse or Metal Complex Dyes	For textiles dyed with disperse or metal complex dyes, fastness to perspiration must be at least between 3 and 4. The goal should be ≥ 4	ISO 105-E04 (2013)
Color Fastness to Saliva and Perspiration	Fast (This corresponds to level 5 of the currently valid standard DIN 53160-1 (2010) (test with artificial saliva) and DIN 53160-2 (2010) (test with artificial sweat). The 5-step grey scale and its use for determining changes in color of textiles in color fastness tests are described in ISO 105-A02 (1993))	§ 64 LFGB BVL B 82.10-1 in combination with DIN 53160-1 and -2
Articles from recyled material	Textile recycling is an important factor for sustainability, but often a black box regarding the mix of (restricted) chemicals inside. Instructions regarding the use of recycled materials are given in our guidance documents, the 'Guidance sheet Input stream management of non-chemical raw materials/intermediates at manufacturers' and the 'Guideline Input Stream Management at Manufacturers'. To enable bluesign® APPROVED articles from recycled materials, bluesign reserves the right to accept in exceptional cases higher limits than given in this document under the precondition of legal compliance, consumer safety and proper input stream management.	

Restricted Substances Table

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Aldehydes									
Formaldehyde	50-00-0	Leather	Usage ban	15	75	300	mg/kg	EN ISO 17226-2 (2019) with EN ISO 17226-1 (2021) confirmation method in case of interferences.	Test method: Alternatively, EN ISO 17226-1 (2021) can be used on its own.
		Textiles Metal parts Polymer parts Down/feather articles	Limitation	15	75	300	mg/kg	ISO 14184-1 (2011)	
Chemical Name	**CAS Number**	**Sector of Use**	**Limit Type**	**A**	**B**	**C**	**Unit**	**Test Method// Sample Preparation**	**Comment**
Alkylphenolethoxylates (APEOs)									
Alkylphenolethoxylates (APEOs)	Several	All	Usage ban		100		mg/kg		For sum of all restricted APEO. Goal should be 100 mg/kg for APEOs + APs. Test methods: See NPEO.
Nonylphenol ethoxylates (NPEO)	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		100		mg/kg	EN ISO 18254-1 (2016) with determination of APEO using LC/MS or LC/MS/MS	For sum of all allocated Members/Substances (if traces above 10 ppm are detected the source of contamination has to be identified and phased out)
		Leather	Usage ban		100		mg/kg	Sample prep. and analysis using EN ISO 18218-1 (2015) with quantification according to EN ISO 18254-1 (2016)	
Octylphenol ethoxylates (OPEO)	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban		100		mg/kg	See NPEO	
		Leather	Usage ban		100		mg/kg	See NPEO	
Alkylphenols (APs)									
Alkylphenols (APs)	Several	All	Usage ban		10		mg/kg		For sum of all alkylphenols.
Nonylphenol (NP), mixed isomers	Several	Textiles Leather	Usage ban		10		mg/kg	EN ISO 21084 (2019)	

		Metal parts Polymer parts Down/feather articles	Usage ban		10		mg/kg	EN ISO 21084 (2019), modified // 1 g sample / 20 ml THF with Sonication for 60 min at 70°C	For sum of all allocated Members/Substances
Octylphenol (OP), mixed isomers	Several	Textiles Leather	Usage ban		10		mg/kg	EN ISO 21084 (2019)	For sum of all allocated Members/Substances
		Metal parts Polymer parts Down/feather articles	Usage ban		10		mg/kg	EN ISO 21084 (2019), modified // 1 g sample / 20 ml THF with Sonication for 60 min at 70°C	
Chemical Name	**CAS Number**	**Sector of Use**	**Limit Type**	**A**	**B**	**C**	**Unit**	**Test Method// Sample Preparation**	**Comment**
Amines									
Aniline - free content	62-53-3	Leather	Usage ban		30		mg/kg	EN ISO 17234-1 (2015)	In case aniline is detected the test needs to be repeated without addition of sodium dithionite.
		Textiles Polymer parts	Usage ban		30		mg/kg	EN ISO 14362-1 (2017)	
Arylamines									
Arylamines (including corresponding salts)	Several	Leather	Usage ban		20 each		mg/kg	EN ISO 17234-1 (2022) EN ISO 17234-2 (2011) // for azo colorants which may release 4-Aminoazobenzene	Single substances listed in Annex (as substance for example in PU, and as decomposition product of azo colorants which, by reductive cleavage of one or more azo groups, may release one or more of the aromatic amines)
		Textiles Metal parts Polymer parts Down/feather articles	Usage ban		20 each		mg/kg	EN ISO 14362-1 (2017) EN ISO 14362-3 (2017) // for azo colorants which may release 4-Aminoazobenzene	
Biocides									
Biocides: Independent from the biocidal substances listed in the RSL, the supplier shall always be requested to declare whether biocides were used or not. Identity of the relevant biocides shall be disclosed by name and CAS No. Declaration duty shall be laid down in the purchase specification.									
Dimethylfumarate	624-49-7	All	Usage ban		0.1		mg/kg	ISO 16186 (2021)	
o-Phenylphenol and its salts	Several	Leather	Limitation	50	100	200	mg/kg	DIN 50009 (2021)	
		Textiles	Limitation		50		mg/kg	DIN 50009 (2021)	
Pyrithione zinc	13463-41-7	All	Usage ban		10		mg/kg	DIN EN 16711-1 (2016) // Total content	Testing: Zn metal content, in case of positive result further testing with CE/ICP-MS.

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Chlorinated Benzenes and Toluenes									
Chlorinated Benzenes and Toluenes	Several	All	Usage ban	5.0			mg/kg	EN 17137 (2018)	For sum of all allocated chlorinated benzenes and toluenes // additional regulation for each allocated Member/Substance - Usage ban 1.0 mg/kg Single substances listed in Annex
Chlorinated Phenols									
Chlorinated Phenols	Several	All	Usage ban	See groups				DIN 50009 (2021) EN ISO 17070 (Leather)	Single substances listed in Annex
Mono- and Dichlorophenols	Several	All	Usage ban	1.0			mg/kg		For sum of all allocated Mono- and DiCPs
Trichlorophenol, all isomers	25167-82-2	All	Usage ban	0.05	0.5	0.5	mg/kg		For sum of all allocated TriCPs
Tetrachlorophenol, its salts and compounds	25167-83-3	All	Usage ban	0.05	0.5	0.5	mg/kg		For sum of all allocated TeCPs
Pentachlorophenol, its salts, esters and compounds	Several	All	Usage ban	0.05	0.5	0.5	mg/kg		For sum of all allocated PCPs
Colorants									
Colorants banned for other reasons	Several	All	Usage ban	20 each			mg/kg	DIN 54231 (2022)	Single substances listed in Annex
Colorants with allergenic potential	Several	All	Usage ban	20 each			mg/kg		
Colorants with carcinogenic potential	Several	All	Usage ban	20 each			mg/kg		
Dioxins and Furans									
Dioxins and Furans - Group 1 and 2	Several	All	Usage ban	5.0			µg/kg	EPA 8290A	For sum of all allocated Members/Substances to Group 1 and 2 Single substances listed in Annex
Dioxins and Furans - Group 1	Several	All	Usage ban	1.0			µg/kg		For sum of all allocated Members/Substances to Group 1 Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Dioxins and Furans (continued)									
Dioxins and Furans - Group 3	Several	All	Usage ban	95			µg/kg	EPA 8290A	For sum of all allocated Members/Substances to Group 3 - official regulation for sum of all allocated Members/Substances to Group 1, 2 and 3 - 100 µg/kg Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Dioxins and Furans - Group 4 and 5	Several	All	Usage ban	5.0			µg/kg		For sum of all allocated Members/Substances to Group 4 and 5 Single substances listed in Annex
Dioxins and Furans - Group 4	Several	All	Usage ban	1.0			µg/kg		For sum of all allocated Members/Substances to Group 4 Single substances listed in Annex
Fibers									
Asbestos	Several	All	Usage ban	Not detected				REM/EDX BGI 505-46 U.S. EPA/600/R-93/116	Single substances listed in Annex
Flame retardants									
Flame retardants	Several	All	Usage ban	5.0 each			mg/kg	EN ISO 17881-1 (2016) for brominated flame retardants EN ISO 17881-2 (2016) for phosphorus flame retardants	Single substances listed in Annex
Chlorinated Paraffins, all chain lengths	Several	Textiles Metal parts Polymer parts Down/feather articles	Usage ban	5.0 each			mg/kg	ISO 22818 (2021)	Single substances listed in Annex
		Leather	Usage ban	100 each			mg/kg	ISO 18219 (2021)	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Glycols									
2-Ethoxyethanol	110-80-5	All	Usage ban	5.0			mg/kg	GC-MS // Extraction with Methanol Plastic articles: 2-Step extraction with THF and Methanol	
2-Ethoxyethyl acetate	111-15-9	All	Usage ban	5.0			mg/kg		
2-Methoxy-1-propanol	1589-47-5	All	Usage ban	5.0			mg/kg		
2-Methoxyethanol	109-86-4	All	Usage ban	5.0			mg/kg		
2-Methoxyethyl acetate	110-49-6	All	Usage ban	5.0			mg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
2-Methoxypropyl acetate	70657-70-4	All	Usage ban		5.0		mg/kg		
Bis(2-methoxyethyl) ether	111-96-6	All	Usage ban		5.0		mg/kg		
Ethylene glycol dimethyl ether	110-71-4	All	Usage ban		5.0		mg/kg		
Triethylene glycol dimethyl ether	112-49-2	All	Usage ban		5.0		mg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Halogenated Biphenyls, halogenated Terphenyls and halogenated Naphthalenes									
Polybrominated Biphenyls	59536-65-1	All	Usage ban		5.0		mg/kg	EN ISO 17881-1 (2016) for brominated compounds ISO/TR 17881-3 (2018) for chlorinated compounds	For sum of all allocated Members/Substances
Polybrominated Naphthalenes	Several	All	Usage ban		1.0		mg/kg		
Polybrominated Terphenyls	Several	All	Usage ban		1.0		mg/kg		
Polychlorinated Biphenyls	1336-36-3	All	Usage ban		1.0		mg/kg		
Polychlorinated Naphthalenes	Several	All	Usage ban		1.0 each		mg/kg		Usage ban 1.0 mg/kg for every allocated Member/Substance
Polychlorinated Terphenyls	61788-33-8	All	Usage ban		1.0		mg/kg		For sum of all allocated Members/Substances
Halogenated Diarylalkanes									
Halogenated Diarylalkanes	Several	All	Usage ban		1.0 each		mg/kg	GC-MS // Extraction following DIN EN 62321-6 (2016)	Single substances listed in Annex
Isocyanates									
Isocyanates	Several	All	Limitation		1.0		mg/kg	EN 13130-8 (2004)	Free content applies to sum of all allocated isocyanates Single substances listed in Annex
Metals									
Antimony, its salts and compounds	Several								
Antimony – as content	7440-36-0	Leather	Limitation	5	10	10	mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
		Textiles	Limitation	5	10	10	mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content // Usage as flame retardant: bluesign® CRITERIA for flame retardants have to be followed.
		Metal parts Polymer parts Down/feather articles	Limitation	60			mg/kg	DIN EN ISO 11885 (2009) EN 71-3 (2019) // Acidic solution migration simulating gastric juices DIN EN ISO 17294-2 (2017)	
		Fibers/yarn	Limitation	260			mg/kg	DIN EN 16711-1 (2016) // Total content	As total metal content // valid for Polyester raw fiber (also dope dyed), but not for finished polyester textiles.
Metals (continued)									
Arsenic, its salts and compounds	Several								
Arsenic – as content	7440-38-2	Textiles Metal parts Polymer parts Down/feather articles	Usage ban	0.2			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content Limit for total metal content: 10 mg/kg
		Leather	Usage ban	0.2			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	
Barium, its salts and compounds	Several								
Barium - as content	7440-39-3	All	Limitation	1000			mg/kg	EN 71-3 (2019) // Acidic solution migration simulating gastric juices DIN EN ISO 17294-2 (2017) DIN EN ISO 11885 (2009)	As extractable metal content.
Cadmium, its salts and compounds	Several								
Cadmium – as content	7440-43-9	Textiles Polymer parts Down/feather articles	Usage ban	0.1			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content
		Leather	Usage ban	0.1			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	
		Textiles Polymer parts Down/feather articles Metal parts	Usage ban	40			mg/kg	DIN EN 16711-1 (2016) // Total content	As total metal content
		Leather	Usage ban	40			mg/kg	EN ISO 17072-2 (2019) // Total content	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Chromium VI, its salts and compounds	Several								
Chromium VI – as content	18540-29-9	Textiles Metal parts Polymer parts Down/feather articles	Usage ban	0.5			mg/kg	EN ISO 17075-1 (2017)	As extractable metal content For leather: Thermal pre-ageing test required in advance: ISO 10195:2018.
		Metal parts	Usage ban	0.5			mg/kg	EN 62321-7-1 (2016)	
		Leather	Usage ban	3.0			mg/kg	EN ISO 17075-1 (2017) EN ISO 17075-2 (2017) DIN EN ISO 4044 (2017)	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Metals (continued)									
Chromium, its salts and compounds	Several								
Chromium – as content	7440-47-3	Metal parts Polymer parts Down/feather articles	Limitation	60			mg/kg	DIN EN ISO 11885 (2009) EN 71-3 (2019) // Acidic solution migration simulating gastric juices DIN EN ISO 17294-2 (2017)	If products are covered with a metal layer, including a chromium layer, coating must be constantly in good condition // as extractable metal content
		Textiles	Limitation	0.5			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content // for textiles dyed with chromium containing metal complex dyes A: 1.0 // B: 2.0 // C: 2.0 mg/kg
Cobalt, its salts and compounds	Several								
Cobalt – as content	7440-48-4	Leather	Limitation	1.0			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	As extractable metal content // for textiles and leather dyed with cobalt containing metal complex dyes A: 1.0 // B: 4.0 // C: 4.0 mg/kg
		Textiles	Limitation	1.0			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	
		Metal parts Polymer parts Down/feather articles	Limitation	1.0	4.0	4.0	mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content
Copper, its salts and compounds	Several								
Copper – as content	7440-50-8	Textiles	Limitation	25	50	50	mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content
		Leather	Limitation	25	50	50	mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Metals (continued)									
Lead, its salts and compounds	Several								

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Lead – as content	7439-92-1	Metal parts	Usage ban	90			mg/kg	DIN EN 16711-1 (2016) // Total content	As total metal content
		Leather	Usage ban	40			mg/kg	EN ISO 17072-2 (2019) // Total content	
		Textiles Polymer parts Down/feather articles	Usage ban	40			mg/kg	DIN EN 16711-1 (2016) // Total content	
		Leather	Usage ban	0.2	1.0	1.0	mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	As extractable metal content
		Textiles Polymer parts Down/feather articles	Usage ban	0.2	1.0	1.0	mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	
Mercury, its salts and compounds	Several								
Mercury - as content	7439-97-6	Metal parts	Usage ban	60			mg/kg	EN 71-3 (2019) // Acidic solution migration simulating gastric juices EN ISO 12846 (2012)	As extractable metal content
		Leather	Usage ban	0.02			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	
		Textiles Polymer parts Down/feather articles	Usage ban	0.02			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	
Nickel, its salts and compounds	Several								
Nickel – as content	7440-02-0	Textiles	Limitation	1.0			mg/kg	DIN EN 16711-2 (2016) // Acidic sweat solution	As extractable metal content // for textiles dyed with nickel containing metal complex dyes A: 1.0 // B: 4.0 // C: 4.0 mg/kg
		Leather	Limitation	1.0			mg/kg	EN ISO 17072-1 (2019) // Acidic sweat solution	As extractable metal content // for leather dyed with nickel containing metal complex dyes A: 1.0 // B: 4.0 // C: 4.0 mg/kg
		Metal parts Polymer parts	Usage ban for A and B	0.5	0.5	-	µg/cm² /week	EN 1811 (2011) + A1 (2015) // Release EN 12472 (2020)	As released metal content

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Monomers									
Acrylamide	79-06-1	All	Usage ban	1.0			mg/kg	CEN/TS 13130-10 (2005)	
Other Chemical Substances									
2-Phenyl-2-propanol	617-94-7	All	Limitation	10	50	50	mg/kg	GC-MS // Extraction with Methanol	
Acetophenone	98-86-2	All	Limitation	20			mg/kg	GC-MS // Extraction with Methanol	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Azodicarbonamide (ADCA)	123-77-3	All	Usage ban	100	200	200	mg/kg	Solvent Extraction // GC-MS or LC-MS or LC-DAD	Not allowed for bluesign® APPROVED chemicals, however the usage on-site is tolerated, if no feasible alternative for foaming is available. Proof that consumer safety limit for ADCA is kept via finished article testing (e.g. footwear sole).
Benzyl chloride	100-44-7	All	Usage ban	1.0			mg/kg	GC-MS // Extraction with Dichloromethane	
Bisphenol A	80-05-7	All	Usage ban	1.0	10	10	mg/kg	Methanol or Methanol: Tetrahydrofuran (1:1) Extraction followed by LC-MS, LC-MS/MS or LC-PDA. Changed test method	For usage range A: 10 mg/kg is accepted when article is not intended to come into contact with mouth.
Bisphenol AF	1478-61-1	All	Usage ban	100			mg/kg		
Bisphenol F	620-92-8	All	Limitation	100			mg/kg		Changed limit type from Usage ban to Limitation. Specific limit for leather tanning and textile aftertreatment: 500 mg/kg
Bisphenol S	80-09-1	All	Usage ban	100			mg/kg		Specific limit for leather tanning and textile aftertreatment: 500 ppm.
Cresol, all isomers	1319-77-3	All	Usage ban	See isomers				BVL B 82.02-8 (2001) // Extraction with KOH DIN EN ISO 17070 (2015) // Extraction with KOH	10 mg/kg for each isomer
m-Cresol	108-39-4	All	Usage ban	10			mg/kg		
o-Cresol	95-48-7	All	Usage ban	10			mg/kg		
p-Cresol	106-44-5	All	Usage ban	10			mg/kg		
Formamide	75-12-7	Textiles	Usage ban	50	50	100	mg/kg	EN 17131 (2019)	
		Metal parts Polymer parts Down/feather articles Leather	Usage ban	50	50	200	mg/kg	CEN ISO/TS 16189 (2013)	
Phenol	108-95-2	All	Limitation	20	50	100	mg/kg	LC-MS // Extraction with Methanol GC-MS // Extraction with Methanol	

Other Chemical Substances (continued)

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Quinoline	91-22-5	All	Usage ban	50			mg/kg	LC-MS/MS // Extraction with Methanol LC-DAD // Extraction with THF or Methanol LC-MS/MS // Extraction with THF	
Isoquinoline	119-65-3	All	Usage ban	50			mg/kg	LC-MS/MS // Extraction with Methanol LC-DAD // Extraction with THF LC-DAD // Extraction with Methanol LC-MS/MS // Extraction with THF	
Siloxanes	Several	All	Usage ban					GC // with reference to TEGEWA method (2021)	Usage ban for every allocated member/substances
Octamethyl cyclotetrasiloxane (D4)	556-67-2	All	Usage ban	30			mg/kg		
Decamethyl cyclopentasiloxane (D5)	541-02-6	All	Usage ban	200			mg/kg		
Dodecamethyl cyclohexasiloxane (D6)	540-97-6	All	Usage ban	200			mg/kg		
Ozone Depleting Substances									
Ozone depleting substances (CFCs) class I	Several	All	Usage ban	0.1 each			mg/kg	GC-MS // Headspace	Usage ban for direct use in manufacturing of articles
Ozone depleting substances (CFCs) class II	Several	All	Usage ban	0.1 each			mg/kg	GC-MS // Headspace	See Regulation (EC) No 1005/2009 for a complete list of single substances
Pesticides									
Pesticides	Several	All	Limitation	0.5			mg/kg	GC-MS // ASE with Acetone/Hexane LC-MS // ASE with Acetone/Hexane GC-MS // Soxhlet Extraction with Acetone/Hexane LC-MS // Soxhlet Extraction with Acetone/Hexane	Applies to total sum of all allocated members/substances Single substances listed in Annex

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
PFAS (Poly- and perfluoroalkyl substances)									
PFAS (Poly- and per- fluoroalkyl substances)	Several	All	Usage ban	50			mg/kg	EN 14582 (total fluorine) ASTM D7359 (total fluorine)	Limit refers to total fluorine content. Articles need to comply latest 01 January 2025.

Chemical Name	CAS Number	Sector of Use				Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Reaction mass of 2,2,3,3,5,5,6,6-octafluoro4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro4-(heptafluoropropyl) morpholine	(EC No. 473-390-7)	All	Usage ban	100	µg/kg	Leather: EN ISO 23702-1 (2023) Others (Textiles Down/feather Polymer parts Metal parts): CEN/TS 15968 (2010) prEN 17681-1:2023	New substance					
Perfluorohexane sulfonic acid and its derivatives	Several	All				Usage ban						Limits defined for subgroups.
Perfluorohexane sulfonic acid and its salts	Several	All				Usage ban	20			µg/kg	Leather: EN ISO 23702-1 (2023) Others (Textiles Down/feather Polymer parts Metal parts): CEN/TS 15968 (2010) prEN 17681-1:2023	
Perfluorohexane sulfon amides	Several	All				Usage ban	20			µg/kg		
Perfluorohexane sulfon amidoethanols	Several	All				Usage ban	20			µg/kg		
Perfluorohexane sulfon amidoethyl(meth)acrylates	Several	All				Usage ban	20			µg/kg		
Perfluorohexane sulfon halides	Several	All				Usage ban	20			µg/kg		
Perfluorohexane sulfon polymers	Several	All				Usage ban	20			µg/kg		
Perfluorooctane sulfonic acid and its derivatives	Several	All				Usage ban	1.0			µg/m²		Single substances listed in Annex
Perfluorohexanoic acid and its salts	Several	All				Usage ban	25			µg/kg		Single substances listed in Annex.
Perfluorooctanoic acid and its salts	Several	All				Usage ban	25			µg/kg		
Perfluorocarboxylic acids (C9-C14) and its salts	Several	All				Usage ban	25			µg/kg		
Perfluorohexanoic acid related substances	Several	All				Usage ban	1000			µg/kg		
Perfluorooctanoic acid related substances	Several	All				Usage ban	1000			µg/kg		
Perfluorocarboxylic acids (C9-C14) related substances	Several	All				Usage ban	260			µg/kg		

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Plasticizers									
Phthalic acid esters	Several	All	Usage ban	50 each			mg/kg	CPSC-CH-C1001-09.4 Textile: EN ISO 14389 (2014)	Single substances listed in Annex
Polyaromatic hydrocarbons (PAHs)									
Polyaromatic hydrocarbons (PAHs)	Several	All	Usage ban	10			mg/kg	AfPS GS 2019 Alternative test methods: EN17132 or ISO 16190	For sum of all allocated PAHs PAHs without substance specific limit are listed in Annex
Benzo(a)anthracene	56-55-3	All	Usage ban	0.5	1.0	1.0	mg/kg		
Benzo(a)pyrene	50-32-8	All	Usage ban	0.2			mg/kg		
Benzo(b)fluoroanthene	205-99-2	All	Usage ban	0.5	1.0	1.0	mg/kg		
Benzo(e)pyrene	192-97-2	All	Usage ban	0.5	1.0	1.0	mg/kg		
Benzo(j)fluoroanthene	205-82-3	All	Usage ban	0.5	1.0	1.0	mg/kg		
Benzo(k)fluoroanthene	207-08-9	All	Usage ban	0.5	1.0	1.0	mg/kg		
Chrysene	218-01-9	All	Usage ban	0.5	1.0	1.0	mg/kg		
Dibenzo(a,h)anthrene	53-70-3	All	Usage ban	0.5	1.0	1.0	mg/kg		
Polymers									
Polyvinyl chloride	9002-86-2	All	Usage ban	See comment				Total chlorine (EN 14582) // FTIR (when chlorine detected)	Usage ban for usage range A and B - Not detected // for usage range C: for special applications. bluesign® has the right to make an individual decision.
Solvents									
1,2-Dichloroethane	107-06-2	All	Usage ban	1.0			mg/kg	GC-MS // Headspace	
Benzene	71-43-2	All	Usage ban	5.0			mg/kg	VDA 278 (2011)	
Dichloromethane	75-09-2	All	Usage ban	5.0			mg/kg	GC-MS // Headspace	Usage ban for direct use in manufacturing of articles

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Solvents (continued)									
N,N-Dimethylacetamide (DMAc)	127-19-5	Textiles	Usage ban		5.0		mg/kg	EN 17131 (2019)	Exceptions: Articles produced by solvent coating, lamination or fiber manufacturing - A/B/C 50 mg/kg. As residual fiber solvent in elastane and PAN fibers with Monitoring status - A: 10 mg/kg, B/C: 50 mg/kg. Aramid fibers: For special applications bluesign® technologies has the right to make an individual decision.
		Leather	Usage ban		5.0		mg/kg	EN ISO 19070 (2016)	
		Metal parts Polymer parts Down/feather articles	Usage ban		5.0		mg/kg	ISO 16189 (2021)	
N,N-Dimethylformamide (DMF)	68-12-2	Textiles	Usage ban		5.0		mg/kg	EN 17131 (2019)	Exceptions: Specific limits are defined for articles produced by lamination or fiber manufacturing - A/B/C 50 mg/kg or by solvent coating, A/B/C = 50/50/250 mg/kg. For PAN fibers bluesign has the right to make individual decisions.
		Metal parts Polymer parts Down/feather articles	Usage ban		5.0		mg/kg	ISO 16189 (2021)	
		Leather	Usage ban		5.0		mg/kg	EN ISO 19070 (2016)	
N-Ethyl-2-pyrrolidone (NEP)	2687-91-4	Leather	Usage ban	10	10	100	mg/kg	EN ISO 19070 (2016)	
		Metal parts Polymer parts Down/feather articles	Usage ban	10	10	100	mg/kg	ISO 16189 (2021)	
		Textiles	Usage ban	10	10	100	mg/kg	EN 17131 (2019)	
N-Methylpyrrolidone (NMP)	872-50-4	Textiles	Usage ban	10	10	100	mg/kg	EN 17131 (2019)	Exception is valid for Aramid fibers: for special applications bluesign® has the right to make an individual decision.
		Metal parts Polymer parts Down/feather articles	Usage ban	10	10	100	mg/kg	ISO 16189 (2021)	
		Leather	Usage ban	10	10	100	mg/kg	EN ISO 19070 (2016)	

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Solvents (continued)									

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Trichloroethylene	79-01-6	All	Usage ban		5.0		mg/kg	GC-MS // Headspace	
Tetrachloroethylene	127-18-4	All	Usage ban		1.0		mg/kg	GC-MS // Headspace	
Toluene	108-88-3	All	Usage ban	10	50	50	mg/kg	GC-MS // Headspace	Usage ban not valid for solvent coating, laminating and painting/lacquering.
Xylene, all isomers	1330-20-7	All	Usage ban	50	100	100	mg/kg	GC-MS // Headspace	Sum of all isomers. Usage ban not valid for solvent coating, laminating and painting/lacquering.
Tin-organic Compounds									
Tin-organic Compounds - as mono-, di- and tri-, tetraalkyltin organics	Several	All	Usage ban					CEN ISO/TS 16179 (2012)	Usage ban for all allocated Members/Substances Limit is lowered for MMT
Methyltin compounds	Several		Usage ban						
Monomethyltin compounds (MMT)	Several	All	Usage ban		1.0		mg/kg		
Dimethyltin compounds (DMT)	Several	All	Usage ban		0.5		mg/kg		
Trimethyltin compounds (TMT)	Several	All	Usage ban		0.5		mg/kg		
Ethyltin compounds	Several		Usage ban						
Tetraethyltin compounds (TET)	Several	All	Usage ban		1.0		mg/kg		
Propyltin compounds	Several		Usage ban						
Dipropyltin compounds (DPT)	Several	All	Usage ban		1.0		mg/kg		
Tripropyltin compounds (TPT)	Several	All	Usage ban		0.5		mg/kg		
Butyltin compounds	Several		Usage ban						
Dibutyltin compounds (DBT)	Several	All	Usage ban		1.0		mg/kg		
Monobutyltin compounds (MBT)	Several	All	Usage ban		1.0		mg/kg		
Tetrabutyltin compounds (TeBT)	Several	All	Usage ban		0.5		mg/kg		
Tributyltin compounds (TBT)	Several	All	Usage ban		0.5		mg/kg		
Hexyltin compounds	Several		Usage ban						
Tricyclohexyltin compounds (TCyHT)	Several	All	Usage ban		0.5		mg/kg		
Tin-organic Compounds (continued)									
Octyltin compounds	Several		Usage ban					CEN ISO/TS 16179 (2012)	Usage ban for all allocated Members/Substances

Chemical Name	CAS Number	Sector of Use	Limit Type	A	B	C	Unit	Test Method// Sample Preparation	Comment
Monooctyltin compounds (MOT)	Several	All	Usage ban		1.0		mg/kg		Limit is lowered for MOT and DPhT
Dioctyltin compounds (DOT)	Several	All	Usage ban		1.0		mg/kg		
Trioctyltin compounds (TOT)	Several	All	Usage ban		0.5		mg/kg		
Tetraoctyltin compounds (TeOT)	Several	All	Usage ban		0.5		mg/kg		
Phenyltin compounds	Several		Usage ban						
Monophenyltin compounds (MPhT)	Several	All	Usage ban		1.0		mg/kg		
Diphenyltin compounds (DPhT)	Several	All	Usage ban		1.0		mg/kg		
Triphenyltin compounds (TPhT)	Several	All	Usage ban		0.5		mg/kg		
UV stabilizers									
UV 320	3846-71-7	All	Usage ban		1000		mg/kg	ISO 24040 // Extraction with Tetrahydrofuran // GC-MS	
UV 327	3864-99-1	All	Usage ban		1000		mg/kg		
UV 328	25973-55-1	All	Usage ban		1000		mg/kg		
UV 350	36437-37-3	All	Usage ban		1000		mg/kg		
UV-326	3896-11-5	All	Usage ban		1000		mg/kg		New substances. Articles need to comply latest 01 July 2026.
UV-329	3147-75-9	All	Usage ban		1000		mg/kg		

Annex (Compilation of single substances)

In the following tables, single substances belonging to below groups are listed:

- Arylamines
- Biocides
- Chlorinated Benzenes and Toluenes
- Chlorinated Phenols
- Colorants
- Dioxins and Furans
- Fibers
- Flame Retardants
- Halogenated Diarylalkanes
- Isocyanates
- Pesticides
- PFAS (Poly- and perfluoroalkyl substances)
- Plasticizers
- Polyaromatic hydrocarbons (PAHs)

Limit values and test methods for the above are provided in the Restricted Substances Table in the previous section.

Chemical Name	CAS Number	Chemical Name	CAS Number
Arylamines		***Xylidines and its salts - with the exception of those specified elsewhere***	***Several***
2,4-Diaminoanisole and its salts	Several		
2,4-Diaminoanisole	615-05-4	*2,4-Xylidine and its salts*	Several
2,4-Diaminoanisole sulphate	39156-41-7	2,4-Xylidine	95-68-1
2,4-Diaminotoluene and its salts	Several	*2,6-Xylidine and its salts*	Several
2,4-Diaminotoluene	95-80-7	2,6-Xylidine	87-62-7
2-Naphthylamine and its salts	Several	***Nitrotoluidines and its salts***	Several
2-Naphthylamine	91-59-8		
2-Naphthylammoniumacetate	553-00-4	*2-Amino-4-nitrotoluene and its salts*	Several
4,4'-Diaminodiphenylmethane and its salts	Several	2-Amino-4-nitrotoluene	99-55-8
4,4'-Diaminodiphenylmethane	101-77-9	***Anisidines and its salts***	Several
4,4'-Methylenebis-(2-chloraniline) and its salts	Several	Anisidine (o-, p-isomers)	29191-52-4
4,4'-Methylenebis-(2-chloraniline)	101-14-4	*2-Anisidine and its salts*	Several
4-Amino-3-fluorophenol and its salts	Several	2-Anisidine	90-04-0
4-Amino-3-fluorophenol	399-95-1	***Benzidines and its salts***	Several
4-Aminobiphenyl and its salts	Several		
4-Aminobiphenyl	92-67-1	*3,3'-Dichlorobenzidine and its salts - with the exception of those specified elsewhere*	Several
4-Chloroaniline and its salts	Several		
4-Chloroaniline	106-47-8	3,3'-Dichlorobenzidine	91-94-1
6-Amino-2-ethoxynaphthalene and its salts	Several	*o-Dianisidines and its salts - with the exception of those specified elsewhere*	Several
6-Amino-2-ethoxynaphthalene	293733-21-8		
o-Aminoazotoluene and its salts	Several	3,3'-Dimethoxybenzidine	119-90-4
o-Aminoazotoluene	97-56-3	*3,3'-Dimethylbenzidine and its salts*	Several
p-Aminoazobenzene and its salts	Several	3,3'-Dimethylbenzidine	119-93-7
p-Aminoazobenzene	60-09-3	*Benzidine and its salts*	Several
Trimethylanilines and its salts	Several	Benzidine	92-87-5
		Benzidine acetate	36341-27-2
2,4,5-Trimethylaniline and its salts	Several	Benzidine dihydrochloride	531-85-1
2,4,5-Trimethylaniline	137-17-7	Benzidine, sulfate	21136-70-9

2,4,5-Trimethylaniline hydrochloride	21436-97-5	Benzidine, sulfate (1:1)	531-86-2

Chemical Name	CAS Number	Chemical Name	CAS Number
Arylamines (continued)		Chlorinated Benzenes and Toluenes (continued)	
Toluidines and its salts	Several	1,4-Dichlorobenzene	106-46-7
		Trichlorobenzenes, all isomers	Several
4,4'-Methylenedi-o-toluidine and its salts	Several	1,2,3-Trichlorobenzene	87-61-6
4,4'-Methylenedi-o-toluidine	838-88-0	1,2,4-Trichlorobenzene	120-82-1
m-Toluidine and its salts	Several	1,3,5-Trichlorobenzene	108-70-3
m-Toluidine	108-44-1	*Tetrachlorobenzenes, all isomers*	Several
o-Toluidine and its salts	Several	1,2,3,4-Tetrachlorobenzene	634-66-2
o-Toluidine	95-53-4	1,2,3,5-Tetrachlorobenzene	634-90-2
p-Cresidine and its salts	Several	1,2,4,5-Tetrachlorobenzene	95-94-3
p-Cresidine	120-71-8	Pentachlorobenzene	608-93-5
p-Toluidine and its salts	Several	Hexachlorobenzene	118-74-1
p-Toluidine	106-49-0	***Chlorinated Toluenes***	Several
Dianilines and its salts	Several	Chlorotoluene, unspecific mixture	25168-05-2
4,4'-Oxydianiline and its salts	Several	Pentachlorotoluene	877-11-2
4,4'-Oxydianiline	101-80-4	*Trichlorotoluenes, all isomers*	Several
4,4'-Thiodianiline and its salts	Several	2,3,4-Trichlorotoluene	7359-72-0
4,4'-Thiodianiline	139-65-1	2,3,6-Trichlorotoluene	2077-46-5
Chlorotoluidines and its salts	Several	2,4,5-Trichlorotoluene	6639-30-1
4-Chloro-2-toluidine and its salts	Several	2,4,6-Trichlorotoluene	23749-65-7
4-Chloro-2-toluidine	95-69-2	3,4,5-Trichlorotoluene	21472-86-6
4-chloro-2-toluidine hydrochloride	3165-93-3	a,a,a-Trichlorotoluene	98-07-7
Biocides		*Dichlorotoluenes, all isomers*	Several
o-Phenylphenol	90-43-7	2,3-Dichlorotoluene	32768-54-0
Chlorinated Benzenes and Toluenes		2,4-Dichlorotoluene	95-73-8
Chlorinated Benzenes	Several	2,5-Dichlorotoluene	19398-61-9
Monochlorobenzene	108-90-7	2,6-Dichlorotoluene	118-69-4
Dichlorobenzenes, all isomers	Several	3,4-Dichlorotoluene	95-75-0

1,2-Dichlorobenzene	95-50-1	3,5-Dichlorotoluene	25186-47-4
1,3-Dichlorobenzene	541-73-1	*Monochlorotoluenes, all isomers*	Several

Chemical Name	CAS Number	Chemical Name	CAS Number
Chlorinated Benzenes and Toluenes (continued)		3,4-Dichlorophenol	95-77-2
2-Chlorotoluene	95-49-8	3,5-Dichlorophenol	591-35-5
3-Chlorotoluene	108-41-8	*Monochlorophenols, all isomers*	25167-80-0
4-Chlorotoluene	106-43-4	2-Chlorophenol	95-57-8
Tetrachlorotoluenes, all isomers	Several	3-Chlorophenol	108-43-0
2,3,4,5-Tetrachlorotoluene	1006-32-2	4-Chlorophenol	106-48-9
2,3,4,6-Tetrachlorotoluene	875-40-1	Colorants	
2,3,5,6-Tetrachlorotoluene	1006-31-1	***Colorants banned for other reasons***	Several
a,a,a,2-Tetrachlorotoluene	2136-89-2	Acid Orange 24	1320-07-6
a,a,a,4-Tetrachlorotoluene	5216-25-1	Acid Violet 49	1694-09-3
Chlorinated Phenols		Basic Blue 26 - with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	2580-56-5
Tetrachlorophenol, its salts and compounds	25167-83-3		
2,3,4,5-Tetrachlorophenol	4901-51-3	Direct Black 91	6739-62-4
2,3,4,6-Tetrachlorophenol	58-90-2	Direct Blue 218	28407-37-6
2,3,5,6-Tetrachlorophenol	935-95-5	Direct Blue 76	16143-79-6
Trichlorophenol, all isomers	25167-82-2	Direct Yellow 1	6472-91-9
2,3,4-Trichlorophenol	15950-66-0	Disperse Orange 149	85136-74-9
2,3,5-Trichlorophenol	933-78-8	Disperse Yellow 23	6250-23-3
2,3,6-Trichlorophenol	933-75-5	*Navy Blue: A mixture of: disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-); trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1- naphtholato)chromat*	Several
2,4,5-Trichlorophenol	95-95-4		
2,4,6-Trichlorophenol	88-06-2		
3,4,5-Trichlorophenol	609-19-8		
Pentachlorophenol, its salts, esters and compounds	Several	Disodium (6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)(1-(5-chloro-2-oxidophenylazo)-2-naphtholato)chromate(1-)	118685-33-9
Pentachlorophenol	87-86-5		
Mono- and Dichlorophenols	Several		
Dichlorophenols, all isomers	25167-81-1	Trisodium bis(6-(4-anisidino)-3-sulfonato-2-(3,5-dinitro-2-oxidophenylazo)-1-naphtholato)chromat	
2,3-Dichlorophenol	576-24-9		

2,4-Dichlorophenol	120-83-2	Basic Violet 1	8004-87-3
2,5-Dichlorophenol	583-78-8	Basic Violet 3 - with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	548-62-9
2,6-Dichlorophenol	87-65-0		

Chemical Name	CAS Number	Chemical Name	CAS Number
Colorants (continued)		Disperse Orange 37/59/76 [3]	51811-42-8
Basic Violet 3 [1]	548-62-9	***Colorants with carcinogenic potential***	Several
Basic Violet 3 [2]	603-48-5	Acid Red 26	3761-53-3
Basic Violet 3 [3]	14426-25-6	Basic Red 9	569-61-9
Solvent Blue 4	6786-83-0	Basic Violet 14	632-99-5
Colorants with allergenic potential	Several	Direct Black 38	1937-37-7
Disperse Blue 102	12222-97-8	Direct Blue 6	2602-46-2
Disperse Blue 106	12223-01-7	Direct Brown 95	16071-86-6
Disperse Blue 124	61951-51-7 15141-18-1	Direct Red 28	573-58-0
Disperse Blue 26	3860-63-7	Disperse Blue 1	2475-45-8
Disperse Blue 3	2475-46-9	Disperse Orange 11	82-28-0
Disperse Blue 7	3179-90-6	Disperse Yellow 3	2832-40-8
Disperse Brown 1	23355-64-8	Pigment Red 104	12656-85-8
Disperse Orange 1	2581-69-3	Pigment Yellow 34	1344-37-2
Disperse Orange 3	730-40-5	Solvent Red 80	6358-53-8
Disperse Red 1	2872-52-8	Solvent Yellow 2	60-11-7
Disperse Red 11	2872-48-2	Solvent Violet 8 - with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	561-41-1
Disperse Red 17	3179-89-3		
Disperse Yellow 1	119-15-3	*Basic Green 4*	Several
Disperse Yellow 39	12236-29-2	Leucomalachite green	129-73-7
Disperse Yellow 49	54824-37-2	Malachite green	10309-95-2
Disperse Yellow 9	6373-73-5	Malachite green chloride	569-64-2
Solvent Yellow 14	842-07-9	Malachite green oxalate	2437-29-8
Disperse Blue 35	Several	Dioxins and Furans	
Disperse Blue 35 [1]	12222-75-2	*Dioxins and Furans - Group 3*	Several
Disperse Blue 35 [2]	56524-77-7	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0
Disperse Blue 35 B	56524-76-6	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9

Disperse Orange 37/59/76	Several	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4
Disperse Orange 37/59/76 [1]	12223-33-5	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9
Disperse Orange 37/59/76 [2]	13301-61-6	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7
Chemical Name	**CAS Number**	**Chemical Name**	**CAS Number**
Dioxins and Furans (continued), Group 4 and 5		Anthophyllite	77536-67-5
Dioxins and Furans - Group 5	Several	Chrysotile	12001-29-5 132207-32-0
1,2,3,4,7,8-Hexabromodibenzo-p-dioxin	110999-44-5		
1,2,3,6,7,8-Hexabromodibenzo-p-dioxin	110999-45-6	Crocidolite	12001-28-4
1,2,3,7,8,9-Hexabromodibenzo-p-dioxin	110999-46-7	Tremolite	77536-68-6
1,2,3,7,8-Pentabromodibenzofuran	107555-93-1	**Flame retardants**	
Dioxins and Furans - Group 4	Several	***Brominated alkyl alcohols***	Several
1,2,3,7,8-Pentabromodibenzo-p-dioxin	109333-34-8	2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0
2,3,4,7,8-Pentabromodibenzofuran	131166-92-2	1-Propanol, 2,2-dimethyl-, tribromo derivates	36483-57-5 1522-92-5
2,3,7,8-Tetrabromodibenzofuran	67733-57-7		
2,3,7,8-Tetrabromodibenzo-p-dioxin	50585-41-6	2,3-Dibromopropan-1-ol-(2,3-DBPA)	96-13-9
Dioxins and Furans - Group 1 and 2	Several	Bis(2,3-dibromopropyl) phosphate	5412-25-9
Dioxins and Furans - Group 2	Several	Tetrabromobisphenol A	79-94-7
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	Tetrabromobisphenol A bis(2,3-dibromopropylether)	21850-44-2
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	Tri(aziridin-1-yl) phosphine oxide	545-55-1
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	Trimethyl phosphate	512-56-1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	Tri-o-cresyl phosphate	78-30-8
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	Tris(2,3-dibromopropyl) phosphate	126-72-7
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	Tris-(2-chloro-1-methylethyl) phosphate	13674-84-5
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	Tris(2-chloroethyl) phosphate	115-96-8
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	Tris(methylphenyl) phosphate	1330-78-5
Dioxins and Furans - Group 1	Several	Tris-[2-chloro-1-(chloromethyl)ethyl] phosphate	13674-87-8
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	Trixylyl phosphate	25155-23-1
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	***Hexabromocyclododecan, all isomers - group for all major diastereoisomers identified***	Several
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9		
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	μ-Hexabromocyclododecane	134237-52-8
Fibers		1,2,5,6,9,10-Hexabromocyclododecane	3194-55-6
Asbestos	Several	Hexabromocyclododecane	25637-99-4
Actinolite	77536-66-4	α-Hexabromocyclododecane	134237-50-6

Amosite	12172-73-5	β-Hexabromocyclododecane	134237-51-7

Chemical Name	CAS Number
Flame retardants (continued)	
Chlorinated Paraffins, all chain lengths	Several
Paraffin wax, chlorinated	63449-39-8
Paraffin, C10-C13, chlorinated	85535-84-8
Paraffin, C14-C17, chlorinated	85535-85-9
Paraffin, C18-C28, chlorinated	85535-86-0
Polybrominated diphenyl ethers	Several
Monobromodiphenyl ether(MonoBDE)	Several
2-Bromodiphenyl ether	7025-06-1
3-Bromodiphenyl ether	6876-00-2
4-Bromodiphenyl ether	101-55-3
Tribromodiphenyl ether (TriBDE)	49690-94-0
Tetrabromodiphenyl ether	40088-47-9
Pentabromodiphenyl ether	32534-81-9
Hexabromodiphenyl ether	36483-60-0
Heptabromodiphenyl ether	68928-80-3
Octabromodiphenyl ether	32536-52-0
Nonabromodiphenyl ether	63936-56-1
Decabromodiphenyl ether	1163-19-5
Polybrominated diphenyl ethanes	Several
Decabromodiphenylethane	84852-53-9

Chemical Name	CAS Number
Halogenated Diarylalkanes	
Monomethyl-dibromo-diphenyl methane	99688-47-8
Monomethyl-dichloro-diphenyl methane	81161-70-8
Monomethyl-tetrachloro-diphenyl methane	76253-60-6
Isocyanates	
1,3-bis(isocyanatomethyl)benzene	3634-83-1
Hexamethylene-di-isocyanate	822-06-0
Isophorone-di-isocyanate	4098-71-9
Tetramethylxylene-di-isocyanate	2778-42-9
2,4,6-Trimethyl-1,3-phenylene diisocyanate	16959-10-7
Diphenylmethane-di-isocyanates	Several
Diphenylmethane-2,2-di-isocyanate	2536-05-2
Diphenylmethane-2,4-di-isocyanate	5873-54-1
Diphenylmethane-4,4-di-isocyanate	101-68-8
Methylenediphenyl diisocyanate - mixed isomers	26447-40-5
Toluene-di-isocyanates	
Toluene-2,4-di-isocyanate	584-84-9
Toluene-2,6-di-isocyanate	91-08-7

Chemical Name	CAS Number
Pesticides	
Aldrin	309-00-2
Azinphos ethyl	2642-71-9
Azinphos methyl	86-50-0
Bromophos-ethyl	4824-78-6
Captafol	2425-06-1
Carbaryl	63-25-2
Chlordane	57-74-9
Chlordecone	143-50-0
Chlordimeform	6164-98-3
Chlorfenvinphos	470-90-6
Chlorobenzilate	510-15-6
Clothianidin	210880-92-5
Coumaphos	56-72-4
Cyfluthrin	68359-37-5
Cyhalothrin, lambda	91465-08-6
Cypermethrin	52315-07-8
Deltamethrin	52918-63-5
Diazinon	333-41-5
Dichlorprop	120-36-5
Dicrotophos	141-66-2
Dieldrine	60-57-1
Dimethoate	60-51-5
Dinotefuran	165252-70-0
Endosulfan, alpha	959-98-8
Endosulfan, beta	33213-65-9
Endrin	72-20-8

Chemical Name	CAS Number	Chemical Name	CAS Number
Pesticides (continued)		Phosphamidon	13171-21-6
Esfenvalerate	66230-04-4	Profenophos	41198-08-7
Ethyl parathion	56-38-2	Propetamphos	31218-83-4
Fenvalerate	51630-58-1	Quinalphos	13593-03-8
Heptachlor	76-44-8	Strobane	8001-50-1
Heptachlor epoxide	1024-57-3	Telodrin	297-78-9
Imidacloprid (ISO)	105827-78-9 138261-41-3	Thiamethoxam	153719-23-4
		Tiacloprid	111988-49-9
Isodrin	465-73-6	Toxaphene	8001-35-2
Kelevan	4234-79-1	Tribufos (DEF)	78-48-8
Lindane (ISO)	58-89-9	Trifluralin - containing < 0.5 ppm NPDA	1582-09-8
Malathion	121-75-5	***Hexachlorocyclohexane, all isomers***	608-73-1
MCPA	94-74-6	***Acetamipirid, its salts, esters and compounds***	Several
MCPB	94-81-5	Acetamipirid (ISO)	135410-20-7
Mecoprop	93-65-2	Acetamipirid [2]	160430-64-8
Methamidophos	10265-92-6	***Dinoseb, its salts, esters and acetate***	Several
Methoxychlor	72-43-5	Dinoseb	88-85-7
Methyl parathion	298-00-0	***2,4-Dichlorophenoxyacetic acid, salts, esters and compounds***	Several
Mevinophos	7786-34-7		
Mirex	2385-85-5	2,4-Dichlorophenoxy acetic acid	94-75-7
Monocrotophos	6923-22-4	***Nitenpyram, its salts, esters and compounds***	Several
o,p'-Dichlorodiphenyl-dichloroethane	53-19-0	Nitenpyram [1]	150824-47-8
o,p'-Dichlorodiphenyl-dichloroethylene	3424-82-6	Nitenpyram [2]	120738-89-8
o,p'-Dichlorodiphenyl-trichloroethane and its isomers - preparations containing DDT and its isomers	789-02-6	***2,4,5-Trichlorophenoxyacetic acid, its salts, esters and compounds***	Several
p,p'-Dichlorodiphenyldichloroethane	72-54-8	2,4,5-Trichlorophenoxy acetic acid	93-76-5
p,p'-Dichlorodiphenyl-dichloroethylene	72-55-9		
p,p'-Dichlorodiphenyl-trichloroethane and its isomers - preparations containing DDT and its isomers	50-29-3		
Perthane	72-56-0		

Chemical Name	CAS Number
PFAS (Poly- and perfluoroalkyl substances)	
Perfluorooctane sulfonic acid and its derivatives	Several
Perfluorooctane sulphonic acid and its salts	Several
Diethanolamine perfluorooctane sulfonate	70225-14-8
Lithium perfluorooctane sulfonate	29457-72-5
Ammonium perfluorooctane sulfonate	29081-56-9
Perfluorooctane sulfonate	45298-90-6
Perfluorooctane sulfonic acid (PFOS)	1763-23-1
Potassium heptadecafluoro-octane-1-sulphonate	2795-39-3
Perfluorooctane sulfon amidoethanols	Several
1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	4151-50-2
1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6, 7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-	1691-99-2
Heptadecafluoro-N-methyloctane sulfonamideoethanol	24448-09-7
Perfluorooctane sulfon polymers	Several
Perfluorooctane sulfon halides	Several
1-Octanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	307-35-7
Perfluorooctane sulfon amides	Several
Heptadecafluoro-N-methyloctane sulfonamide	31506-32-8
Perfluorooctane sulfonamide	754-91-6
Perfluorooctane sulfon amidoethyl (meth) acrylates	*Several*
Perfluorohexanoic acid and its salts	*Several*
Perfluorohexanoic acid (PFHxA)	307-24-4
Perfluoroheptanoic acid and its salts	Several
Perfluoroheptanoic acid	375-85-9
Potassium perfluoroheptanoate	21049-36-5
Perfluorooctanoic acid and its salts	Several
Ammonium pentadecafluoro octanoate	3825-26-1
Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, sodium salt (1:1)	335-95-5
Perfluorooctanoic acid (PFOA)	335-67-1
Potassium perfluorooctanoate	2395-00-8

Chemical Name	CAS Number
PFAS (Poly- and perfluoroalkyl substances)	
Perfluorooctanoic acid related substances	Several
Methyl perfluorooctanoate	376-27-2
Ethyl perfluorooctanoate	3108-24-5
Perfluorooctylethyl alcohols	Several
Perfluorooctylethanol	678-39-7
Perfluorooctylethyl olefins	Several
Perfluorooctylethene	21652-58-4
Perfluorooctylethyl halides	Several
1H,1H,2H,2H-Perfluorodecyliodide	2043-53-0
Heptadecafluoro-1-iodooctane	507-63-1
Pentadecafluorooctyl fluoride	335-66-0
Perfluorooctylethyl acrylate or methacrylate	Several
Perfluorooctylethyl polymers	Several
Perfluorocarboxylic acids (C9-C14) related substances	Several
Perfluorodecanoic acid related substances	Several
10:2 Fluorotelomer alcohol - (10:2 FTOH)	865-86-1

Chemical Name	CAS Number
Plasticizers	
Phthalic acid esters	Several
Bis-(2-methoxyethyl) phthalate	117-82-8
Butylbenzyl phthalate	85-68-7
Dibutyl phthalate	84-74-2
Di-cyclohexyl phthalate	84-61-7
Diethyl phthalate	84-66-2
Diethylhexyl phthalate	117-81-7
Di-iso-butyl phthalate	84-69-5
Di-iso-hexyl phthalate	71850-09-4
Di-iso-octyl phthalate	27554-26-3
Di-iso-pentyl phthalate	605-50-5
Dimethyl phthalate	131-11-3
Di-n-hexyl phthalate	84-75-3
Di-n-octyl phthalate	117-84-0
Dinonyl phthalate	84-76-4
Di-n-pentyl phthalate	131-18-0
Di-n-propyl phthalate	131-16-8
n-Pentyl-isopentyl phthalate	776297-69-9
1,2-Benzenedicarboxylic acid, benzyl C7-9-branched and linear alkyl esters	68515-40-2
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkylesters, C7-rich	71888-89-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkylesters	68515-42-4
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	Several
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5
1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1
Di-iso-nonyl phthalate - (DINP)	Several
Di-iso-nonyl phthalate - iso & n-Butene based	68515-48-0
Di-iso-decyl phthalate	Several
Di-iso-decyl phthalate [1]	26761-40-0
Di-iso-decyl phthalate [2]	68515-49-1
Polyaromatic hydrocarbons (PAHs)	
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Benzo[rst]pentaphene	189-55-9
Dibenzo[b,def]chrysene	189-64-0
Dibenzo[def,p]chrysene	191-30-0
Cyclopenta[c,d]pyrene	27208-37-3
Benzo(ghi)perylene	191-24-2
Fluoranthene	206-44-0
Fluorene	86-73-7
Indeno(1,2,3-cd) pyrene	193-39-5
Methylpyrene, 1-	2381-21-7
Naphthalene	91-20-3
Naphtho[1,2,3,4-def]chrysene	192-65-4
Phenanthrene	85-01-8
Pyrene	129-00-0

Recreational Equipment, Inc.
REI Co-op & Co-op Cycles
1700 45th Street East
Sumner, WA 98352

Addendum 1: Summary of Revisions

The following changes are included in this October 2024 update of the REI RSL. The following revisions are based on modifications to REI's aspirations, internal processes and revisions made to the July 1, 2024 bluesign® Restricted substances list (bluesign® RSL).

These revisions incorporate new scientific knowledge on the toxicological profile of substances, international chemical regulations, revised risk assessments, feedback from product stewardship experts, industry best practices, and new analytical testing standards.

General

- Implementation date updated to reflect that this version of the REI Chemical Management Guide & RSL must be implemented by January 1, 2025
- Page 5: made some minor revisions under PFAS section to reflect our current status in transitioning away from PFAS.
- Page 6: Revised the rejected concentration of total Lead under section "Children's bicycle requirements"
- Page 8: added the requirements of "Date of receipt and Expiration date" to Chemical Inventory List requirements
- Page 17, 18, 19: made some amendments to align with the latest REI RSL testing packages (added Arsenic (extractable) & Nickel (extractable) and added testing requirements for some other Extractable heavy metals and other chemicals)
- Page 21, changed "Restricted Parameters" to be "Consumer Safety Limits"
- Page 46: made minor revisions on the language of addendum #3

Consumer Safety Limits

- Added other requirements such as odor, Sensitizing Disperse Dyes, Textiles Dyed with Disperse or Metal Complex Dyes, Color Fastness to Saliva and Perspiration, outside of pH requirements as existing Guide.

Restricted Substances List (RSL)

- Restricted Substances table aligned with bluesign® RSL 15.0, new substances, changed limits or methods as follows:

Summary of the changes

(Changes are highlighted in red)

Isocyanates						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
2,4,6-Trimethyl-1,3-phenylene diisocyanate	16959-10-7	All	Usage ban	1	mg/kg	New substance. Group limit.

Other Chemical Substances						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
Bisphenol F	620-92-8	All	Limitation	100	mg/kg	Changed limit type from Usage ban to Limitation. Added specific limit 500 mg/kgfor leather tanning and textile aftertreatment.
Azodicarbonamide (ADCA)	123-77-3	All	Usage ban	100/200/200	mg/kg	Not allowed for bluesign® APPROVED chemicals, however the usage on-site is tolerated, if no feasible alternative for foaming is available. Proof that consumer safety limit for ADCA is kept via finished article testing (e.g. footwear sole).

Halogenated Diarylalkanes						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
Toluene-di-isocyanates		All	Usage ban	1.0 each	mg/kg	Deleted CAS number

PFAS (Poly- and perfluoroalkyl substances)						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
Potassium perfluoroheptanoate	21049-36-5	All	Usage ban	50	µg/kg	New substance listed in Annex. Group limit of Perfluoroheptanoic acid and its salts
Perfluoroheptanoic acid	375-85-9	All	Usage ban	50	µg/kg	New substance listed in Annex. Group limit of Perfluoroheptanoic acid and its salts
Ammonium perfluorooctane sulfonate	29081-56-9					**Amendment substance of** Perfluorooctane sulphonic acid and its salts
Reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl) morpholine	EC No. 473-390-7	All	Usage ban	100	µg/kg	New substance.

Solvents						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
N,N-Dimethylformamide (DMF)	68-12-2	Textiles	Usage ban	5.0	mg/kg	Exceptions: Specific limits are defined for articles produced by lamination or fiber manufacturing (deleted the words "by solvent coating) - A/B/C 50 mg/kg or by solvent coating, A/B/C = 50/50/250 mg/kg. For PAN fibers bluesign has the right to make individual decisions.
		Metal parts Polymer parts Down/feather articles	Usage ban	5.0	mg/kg	
		Leather	Usage ban	5.0	mg/kg	

Tin-organic Compounds						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
Monooctyltin compounds	Several	All	Usage ban	1.0	mg/kg	Limit is lowered.
Diphenyltin compounds	Several	All	Usage ban	1.0	mg/kg	
Monomethyltin compounds	Several	All	Usage ban	1.0	mg/kg	

UV stabilizers						
Chemical Name	CAS Number	Sector of Use	Limit Type	Value A/B/C	Unit	Comment
UV-326	3896-11-5	All	Usage ban	1000	mg/kg	New substances.
UV-329	3147-75-9	All	Usage ban	1000	mg/kg	

Revised test methods

Substances	CAS Number	Revision	Comment
Bisphenol A	80-05-7	Methanol or Methanol: Tetrahydrofuran (1:1) Extractionfollowed by LC-MS, LC-MS/MS or LC-PDA.	Changed test method.
Bisphenol AF	1478-61-1		
Bisphenol F	620-92-8		
Bisphenol S	80-09-1		
PFAS	All listed substances	EN ISO 23702-1 (2023)	Valid for Leather.
		CEN/TS 15968 (2010) prEN 17681-1:2023	Valid for Textile, Down/ feather, Polymer and Metal parts.

Recreational Equipment, Inc.
REI Co-op & Co-op Cycles
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Sumner, WA 98352

Addendum 2: Supplier Acknowledgement of Receipt and Understanding

By completing this form, we, the "Supplier," hereby acknowledge that we have received, understand, and agree to meet the expectations of the Recreational Equipment, Inc. (REI) Restricted Substances List (RSL). We also acknowledge and understand that this RSL replaces any previous REI RSL. The requirements set forth in the RSL are in addition to, not a replacement of, other standards issued by REI. The REI RSL compliance expectations are as follows:

- Review the REI Guide & RSL annually [(1)].
- Adhere to all applicable legal requirements, regardless of whether those requirements are captured in this document.
- Develop a Chemical Management System(CMS) which includes an independent process for ensuring compliance with this Guide & RSL and all legal requirements.
- Inform material suppliers and sub-contractors of relevant requirements and expectations.
- Maintain and regularly update a chemical inventory list (CIL) and a valid chemical Safety Data Sheet (SDS) for each processing chemical stored and used on-site.
- Clearly post information about hazards associated with each chemical and chemical formulation in storage and use areas.
- Provide staff with appropriate training and protective equipment to prevent chemical exposure.
- Upon request, provide REI with existing compliance documentation or laboratory test results within three working days of receiving the request.
- Upon request, disclose the identity and use of each chemical used in materials for REI.
- Upon request, disclose the contact information for upstream suppliers and sub-contractors used to make REI materials and products.
- If requested, complete and return Addendum 3: Material Supplier Survey;
- Complete and return Addendum 2: RSL *Acknowledgement of Receipt and Understanding* as confirmation of accepting these terms; and
- Notify REI immediately if any materials or products cannot meet the requirements of the RSL using Addendum 4: RSL Failure Remediation Form.

RSL Testing: Material, component, and product testing may be required by REI at any stage of manufacturing to demonstrate compliance with the requirements of this document. Testing may be random or part of REI's seasonal RSL testing program, and would be conducted at REI's expense, unless the testing is in direct response to an identified RSL or regulatory compliance violation, in which case, the testing will be at the supplier's expense.

Existing Test Reports: If a material requested for RSL testing has been tested in the past year, you may provide the applicable test report to REI for review. REI will determine and advise whether the report can be accepted in lieu of additional testing.

(1) https://www.rei.com/dam/rei-chemical-management-guide-and-rsl.pdf

Transparency: Suppliers shall allow an authorized representative of REI to inspect the manufacturing facility where REI products or raw materials are developed, manufactured, or stored. Visits would be conducted during normal business hours.
REI reserves the right to cancel relevant orders if the Supplier fails to meet any of these requirements.

Supplier: (Full Corporate Name)	
Signed By:	
Printed Name:	
Email:	
Title:	
Date Signed:	
Name of primary point of contact for chemicals management:	
Email:	
Title:	

Recreational Equipment, Inc.
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Addendum 3: Material Supplier Survey

Chemicals Management or Environmental Health and Safety point of contact:			
Name:		Title:	
Company:		Email:	
Social Compliance point of contact:			
Name:		Title:	
Company:		Email:	
Date (dd-mm-yy):			

REI is committed to supporting achievement of the highest levels of product safety, workplace safety, resource efficiency, wastewater treatment, and emissions controls in our supply chain.

We are strong supporters of the bluesign® system, which supports improvement in all of these areas. REI utilizes bluesign® approved fabrics and trims widely across the REI Co-op brand. We also acknowledge the benefits of using other resources to improve environmental health and safety (EHS) and to address specific issues which may have a direct impact on the freedom and safety of workers.

We give preference to suppliers that are taking steps to continuously improve EHS in operational processes and/or have proactively joined social compliance initiatives. To that end, please tell us about the initiatives, programs or certifications that your facility has in place.

Mark "☒" for any of the following initiatives to which your facility is committed:

- ☐ Actively maintaining a chemical inventory for each processing chemical stored and used on-site. If yes, attach the most recent chemical inventory list.
- ☐ Using the Higg Index Facilities Environment Module (FEM) to assess your company and operations. If applicable, please connect with REI through the Higg Index platform.
- ☐ Using the Higg Index Facilities Social Labor Module (FSLM) / Social Labor Convergence Project (SLCP) converged assessment framework to assess your company and operations. If applicable, please list which brand(s)/organization(s) have requested you to complete either the FSLM or the SLCP:
- ☐ Using the bluesign® bluefinder to select approved chemical inputs
- ☐ bluesign® system partner. Partnership status:
- ☐ ISO 14001 accreditation
- ☐ OHSAS 18001 accreditation
- ☐ OekoTex 100 certification
- ☐ OekoTex STeP certification
- ☐ Brand-requested social or environmental audit in the last year. If applicable, please list which brand(s)/organization(s) have requested an audit:
- ☐ Other 3rd party verified EHS programs. If checked, please list:
- ☐ Other independent initiatives. If checked, please list:

Please answer the following questions regarding migrant labor:

- Do you currently hire foreign migrant workers?
  - If yes, how many and from which countries?
  - If yes, do you hire these workers through government or an independent agent?

Please return this survey via email attachment to ProductSustainability@REI.com with the subject line: **ATTN: REI RSL [Supplier name] YYYY-MM-DD.**

Thank you for your continuing partnership and your cooperation in ensuring that REI Co-op and Co-op Cycles products meet the high expectations of our members.

Recreational Equipment, Inc.
REI Co-op & Co-op Cycles
1700 45th Street East
Sumner, WA 98352

Addendum 4: RSL Failure Remediation Form

This form initiates a Corrective Action Plan (CAP) for a restricted substance failure in a raw material *or* finished product. REI staff, the material supplier, and/or product manufacturer will provide the below information, as appropriate.

All corrective actions must be approved by REI prior to action. Submit completed form to ChemicalTesting@REI.com.

Part 1: RSL Failure Details (*to be completed by REI staff*); see attached test report(s)

Restricted substance(s) (name & CAS):	
Detection level (ppm):	
REI limit (ppm)	
Test method:	
Test lab:	
Technical report#:	
TRF#:	

Part 2: Material Details *(to be completed by REI staff)*

REI Enovia Article #/s:	
Supplier article #/s:	
Material description:	
Material content:	
Material supplier:	
Colors affected:	

Part 3: Product Information for styles impacted by this failure *(to be completed by the supplier)*

Style/s:	
Season/s:	
Number of units with failure:	

Part 4: Manufacturing Information impacted by this failure *(to be completed by the product vendor)*

How many yards/units ordered?	
How many yards received?	
Semi-finished products on-site or yards of fabric in use?	
How many finished products on-site:	
How many products shipped:	

Part 5: Root Cause Analysis *(to be completed by the supplier)*

What is the source of the RS failure? (*please list the chemical product*)	
Has source been confirmed by review of SDS, chemical test, or other?	
Why was this chemical being used?	

What other REI materials may be contaminated?	
Other explanation:	

Attach additional pages if needed.

Part 6: Proposed Corrective Actions by Supplier *(to be completed by the Supplier)*
May include raw chemical testing, material re-testing, stopping production, sourcing alternatives, etc.

Describe proposed corrective actions	Person in charge	Due date	Comments

Part 7: Disposition *(to be completed by REI staff after reviewing relevant information)*

Part 8: Corrective Actions by REI *(to be completed by REI staff)*

	Steps of Corrective Action	Person in charge	Due date	Comments
1.				
2.				
3.				
4.				

Attach additional pages if needed.

Part 9: Corrective Actions Agreement *(to be completed once corrective actions are finalized)*

REI staff:		Supplier:	
Signature:		Signature	
Date signed:		Date signed:	