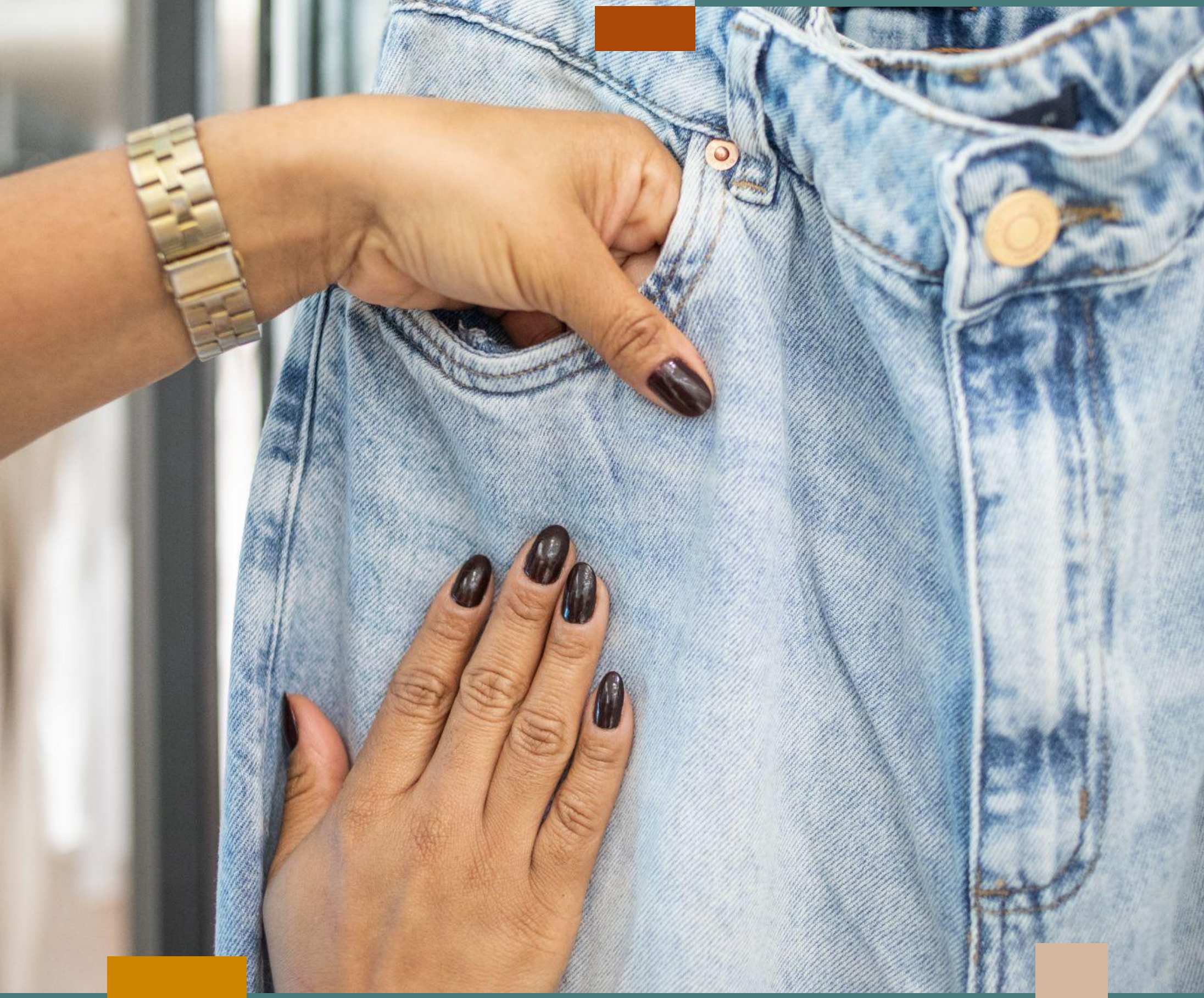
LOJAS RENNER S.A.

RENNER CAMICADO YOUCOM realize ASHUA repassa



Manual of Restricted Substances

Clothes, Shoes, and Accessories.

2026 - Version 5

Manual of Restricted Substances

Clothes, Shoes, and Accessories.

Introduction

We are a fashion and lifestyle ecosystem, a leader in omnichannel fashion retail, and one of the largest brands in Brazil. Our business and actions are guided by the principles of sustainability and are represented through our brands: Renner, which has clothes and accessories for all styles; Camicado, for homewares; Youcom, a young fashion specialist; Ashua, which offers clothing in sizes 46 to 54; and Repassa, a second-hand clothing, footwear and accessories platform.

Considering all businesses within our ecosystem. In addition to all the brands we have in Brazil, there are also Renner retail units in Uruguay and Argentina, and offices in China and Bangladesh. Lojas Renner S.A. also includes Realize CFI, which supports our retail by providing and managing financial products, and Uello Tecnologia, a digital native logtech that focuses on urban deliveries.

Sustainability Policy[1]

Since 2016, this policy has described Lojas Renner S.A.'s commitment to sustainable development and provided guidance to management, including the values and positioning of the Company, its entire value chain and other stakeholders: from raw material producers, to the agents involved post -consumption.

After achieving the goals set for 2018-2021, we launched our **strategic sustainability cycle in 2022, that had new commitments to be achieved by 2030.**

We set 12 objectives to make this happen. They were even more comprehensive and ambitious than the previous ones and covered the Company's entire fashion and lifestyle ecosystem. They were based on three fundamental areas: Climate, Circularity, and Regenerative Solutions; Influencing Through Connections; and Relationships Based on Humanity and Diversity.

1 Refer to the 2024 Annual Report at https://lojasrenner.mzweb.com.br/a-companhia/relatorio-anual/

Relationships Based on Humanity and Diversity

Create relationships based on humanity and diversity, to ensure that every individual is able to realize their full potential.

Engagement and Well-being

To be a national leader on engagement. To provide a living wage* and to constantly improve the well-being of our staff.

Diversity & Inclusion

Create a culture of diversity, equity and the inclusion of minority groups**, so that we achieve, at least:

55%

of senior leadership positions held by women

50%

of management posts occupied by Black employees

To provide a portfolio of diverse and inclusive products and services that takes into account the potential of every part of the business.

* Where workers are paid an amount sufficient to provide a decent standard of living for them and their family, according to their location.

** Racial, LGBTQIAP+, Persons with Disabilities, and Women.

Climate, Circularity and Regenerative Solutions

Advance in building a circular, regenerative, and low-carbon business, encouraging and enabling our customers to make conscious choices.

Climate and Water

Accelerate the transition to a low carbon economy, achieving science-based targets (SBTi) and climate neutrality by 2050.

Reduce the amount of water consumed by our operations and strategic suppliers and eliminate waste including chemical products with restricted substances that are used to produce textiles and footwear.

Circularity and Regeneration

Incorporate the principles of the circular economy into our design for products, services and business models.

Invest in developing raw materials for textiles that are circular and renewable, so that all of our main raw materials are more sustainable.

Eliminate plastic packaging from physical stores and e-commerce that cannot be reused or recycled by our customers; and seek solutions to reduce generation and promote the circularity of the main waste from operations and strategic suppliers.

Connections that Amplify

Amplify the impact of our connections, building with our suppliers and partners the answers to the sector's challenges.

Value Chain

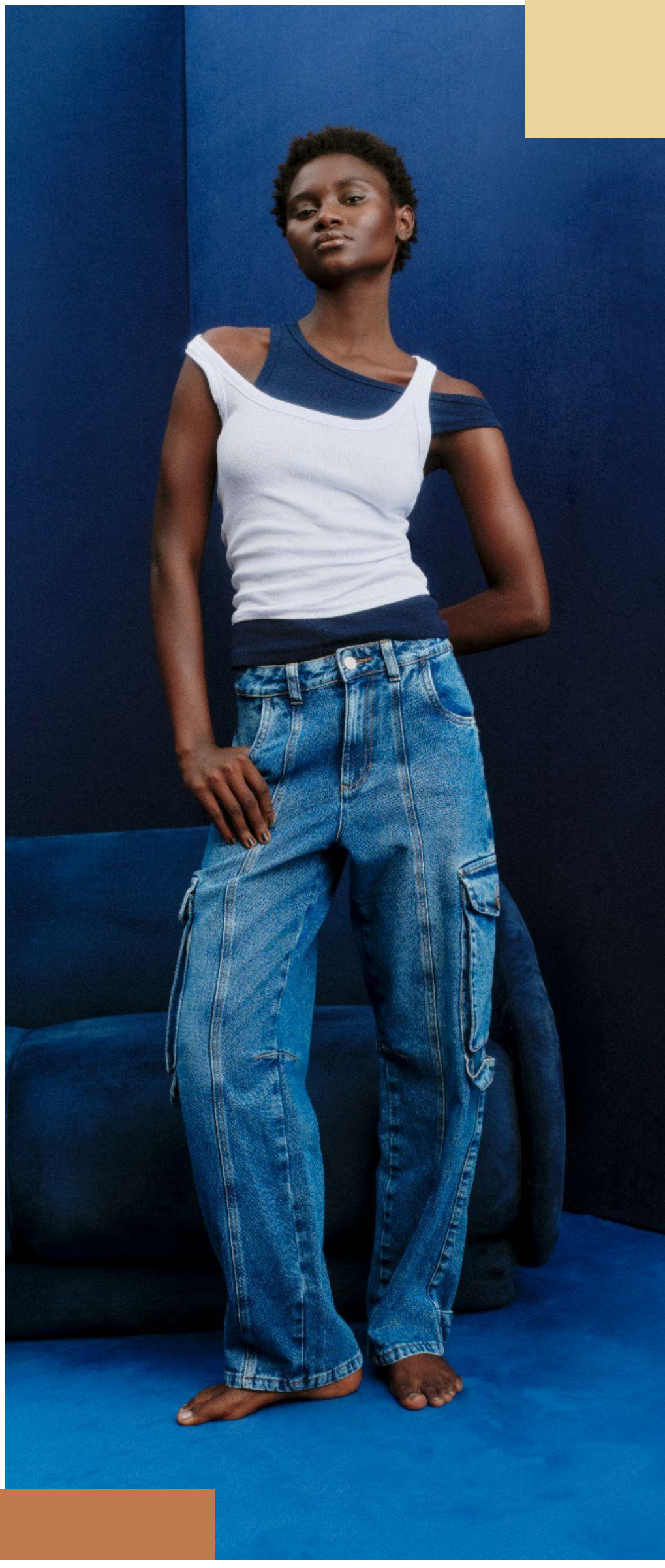
Certify the supplier chain through social and environmental criteria and concentrate purchases on suppliers with strong management and performance.

Foster the adoption of a living wage* by strategic suppliers.

Achieve 100% traceability of cotton products and advance traceability of other textile raw materials.

Monitor sellers and encourage inclusion and social and environmental development.

* Where workers are paid an amount sufficient to provide a decent standard of living for them and their family, according to their location.



Contents

1. Scope, Objectives and Field of Application

The scope of this manual covers **all products sold by the company that are classified as textiles, footwear or accessories (as well as the current processes in the supply chain)**; however, it can also apply to sports equipment and home textiles.

Some examples of products:

- **Clothing** – shirts, t-shirts, blouses, vests, jackets, coats, sweatshirts, sweaters, pants, shorts, skirts, dresses, items for the bath, beach or pool, socks, pajamas, underwear, and any other item used to cover the body.

- **Footwear** – shoes, sneakers, boots, sandals, flip-flops, slippers, or any other durable foot covering designed to protect, cover, or make your feet comfortable.

- **Accessories** – purses, wallets, backpacks, bags, hats, headbands, hair clips, headscarves, scarves, gloves, knit caps, sunglasses, caps, visors, jewelry and costume jewelry (rings, necklaces, earrings, pendants, bracelets etc.), watches, or any product intended to complement clothing, both transportation and use.

By publishing the Lojas Renner S.A Restricted Substances Manual, the company has provided a single source of information for the management, on the control and monitoring of restricted substances throughout our supply chain. We intended this publication to:

- **Inform you, clearly and precisely, of the maximum acceptable limit and criteria** for any restricted chemical substances in the products sold by the company.

- **Ensure that our products comply** with the chemical restrictions in this manual and the relevant legislation.

- Provide **guidance on testing the materials in the products sold** by Lojas Renner S.A.

- **Monitor the materials and products sold** by Lojas Renner S.A.

We understand that Responsible Fashion requires the commitment of the entire supply chain.

We believe that by working responsibly together we can eliminate all harmful chemicals (restricted substances) from our production chain and make the process better and safer for all stakeholders, improving workers' conditions and benefiting customers and the environment.

2. References

The following listed documents were used as references for this Manual:

ABNT NBR 16.787:2019 Standard - Textile Materials - Chemical Safety in Textiles - Requirements and Testing Methods
https://www.abntcatalogo.com.br/

ABNT NBR 16.905:2020 Standard - Components in Footwear and Artifacts - Guide Limits on Restricted Substances
https://www.abntcatalogo.com.br/

Ordinance No. 123 INMETRO, dated February 16, 2021.
http://www.inmetro.gov.br/legislacao/rtac/pdf/RTAC002714.pdf

AFIRM Chemistry Toolkit
www.afirm-group.com/toolkit

AFIRM Chemical Information Sheets
www.afirm-group.com/chemical-information-sheets

American Apparel & Footwear Association
https://www.aafaglobal.org/AAFA/Solutions_Pages/Restricted_Substance_List

Office of Environmental Health Hazard Assessment (OEHHA)
https://oehha.ca.gov/proposition-65/proposition-65-list

Substances restricted under REACH
https://www.echa.europa.eu/substances-restricted-under-reach

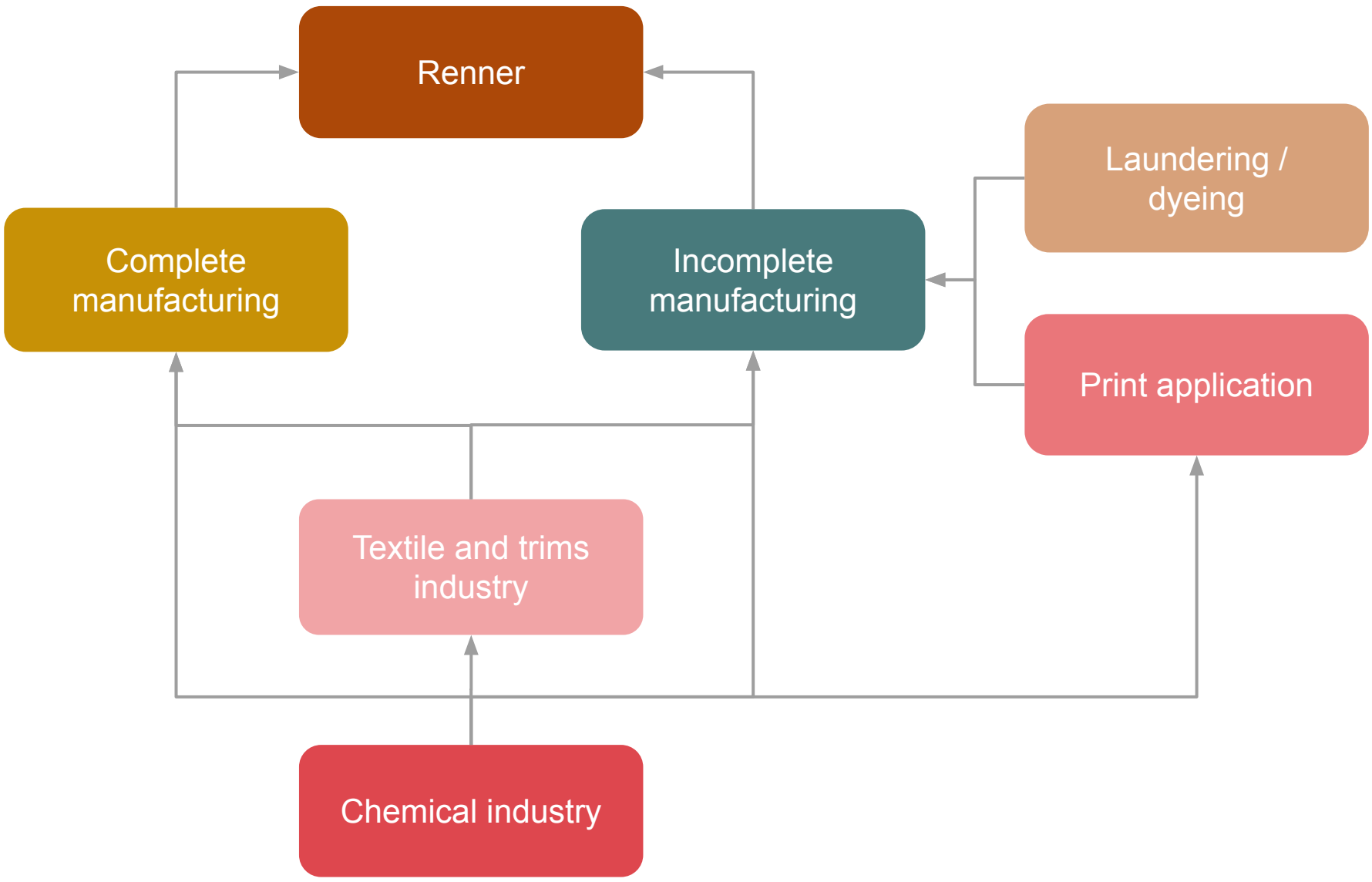
ZDHC Manufacturing Restricted Substances List (ZDHC MRSL) - Version 3.1
https://mrsl-30.roadmaptozero.com/

ZDHC Wastewater Guidelines Version 2.2 | September 2024
https://downloads.roadmaptozero.com/output/ZDHC-Wastewater-Guidelines

Important additional information on managing chemical products can be found through these links and they should be reviewed regularly.

3. Dependencies in the Supply Chain

There are many similarities between the supply chains of manufactured goods sold by Renner, such as clothing, footwear and accessories. The diagram below provides a simple description of the supply chain for textiles and clothing.



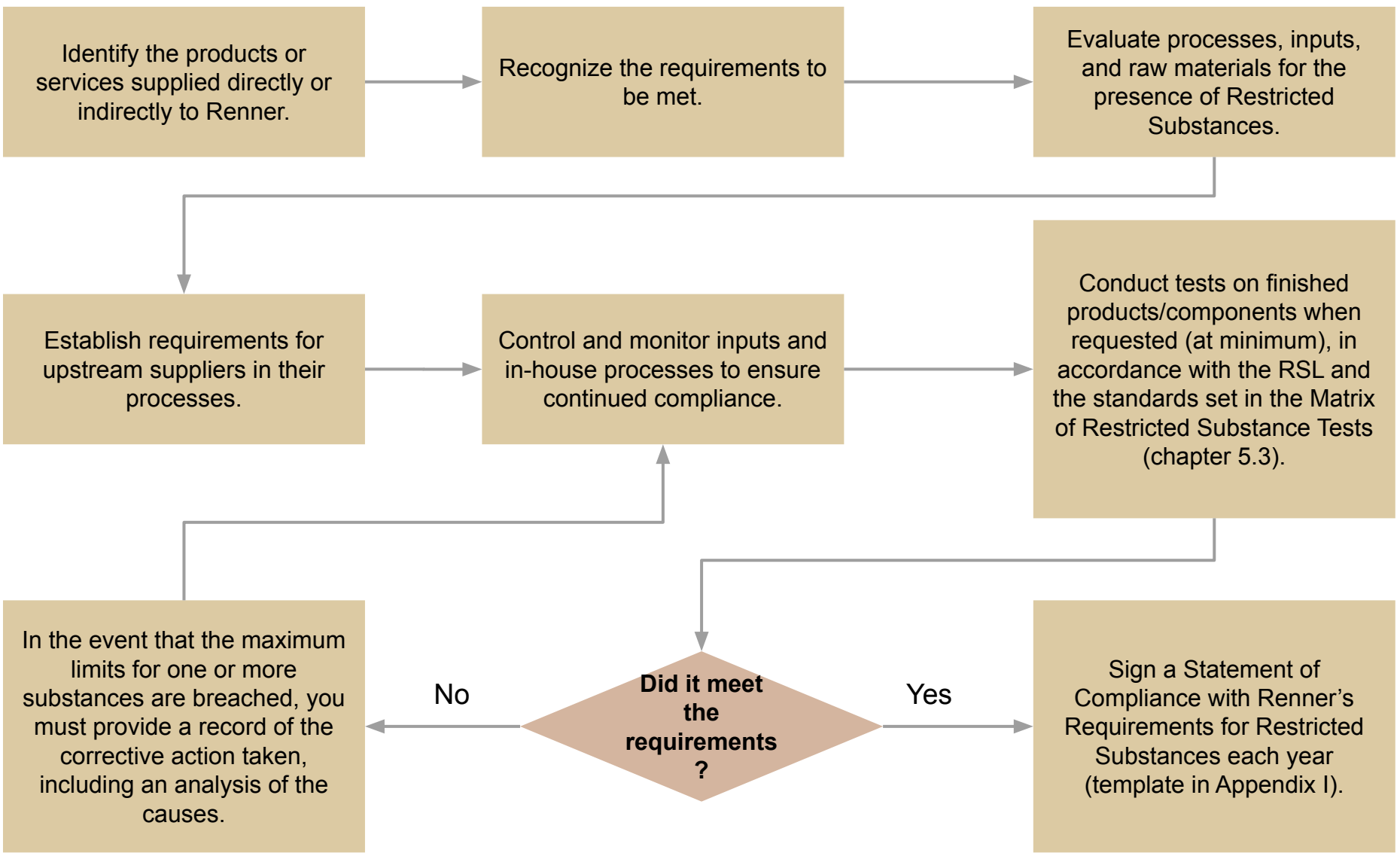
This Manual describes the requirements that apply to the different layers of the supply chain. These requirements are designed to ensure that we have **SAFE PRODUCTS and SAFE PROCESSES**, with regard to RESTRICTED SUBSTANCES. Based on these premises, Renner adopts an RSL – Renner Restricted Substances List, which establishes the restricted substances and the maximum tolerable limits in finished products and in their finished components/raw materials (see Chapters 5 to 5.4 of this Manual).

4. Compliance with Renner's Restricted Substance Requirements

The company's goal is to **ensure that the products it sells meet sustainability standards and are safe for human health and the environment**, **i.e. they can be considered SAFE PRODUCTS.** Therefore, all materials, components, items and finished products that are manufactured for or supplied to Lojas Renner S.A. must comply with the requirements in this document.

Similarly, the company' also has a goal to **promote SAFE PROCESSES by ensuring a cleaner and more sustainable supply chain.**

Below is a **"STEP BY STEP GUIDE FOR SUPPLIERS"** to help them to understand and comply with the requirements set out in this Manual:



By following this guidance, suppliers should be able to be more confident that they can meet Renner's requirements.

Note: For **imported products**, the submission of the OEKOTEX certification is equivalent to the “Declaration of Compliance” included in this manual.

5. Safe Products (regardless of any restricted substances)

The products that Lojas Renner S.A. sells are intended for various different audiences. For the purpose of applying the limits specified for restricted substances, these are classified according to age group:

- **Babies - 0 to 36 months;**
- **Children – 36 months to 14 years old;**
- **Adults – over 14 years old.**

Products are considered safe, in relation to restricted substances, when they comply with the “Renner Limits” for the different substances listed in the Renner Restricted Substances List (see item 5.4).

How well as product complies with these restrictions, depends on the materials it is composed of. It is important, therefore, to identify and be able to analyze these materials.

5.1 Classification of the Materials Contained Within the Products

The products sold by the company, whether textiles, footwear and accessories, are made up of one or more different materials. These can be categorized according to their origin or type.

- **Natural fibers** – Example: woven fabrics, knitted material, non-woven fabrics, ribbons and other items made from cotton, wool, silk, hemp, cashmere, linen, fur, or semi-synthetic materials, such as rayon and lyocell, produced from natural fibers.
- **Synthetic fibers** – Example: woven fabrics, knitted material, non-woven fabrics, ribbons and other items made from polyester, polyamide or acrylic.
- **Blended fibers** – Example: woven fabrics, knitted material, non-woven fabrics, ribbons and other items made from polyester and cotton.

Synthetic leather - Materials that imitate leather by combining a textile with a polymeric coating, usually PU or PVC.

Leather - Material obtained by tanning and finishing animal skins (cow, pig, goat or other leather).

Natural materials - Materials derived from animals or plants that have had little processing. These include horn, bone, cork, wood, paper, straw, feathers and down. This does not include natural fibers, leather, stones or metals.

Metals – Examples: materials such as steel, stainless steel, brass, aluminum, copper, gold, silver and metal alloys, such as Zamac (an alloy of zinc and aluminum, magnesium and copper).

Polymeric materials - This group includes plastic, rubber and foam, which may be natural or synthetic - (examples: EVA (ethylene vinyl acetate), PE (polyethylene), PVC (polyvinyl chloride), PS (polystyrene), PP (polypropylene), ABS (acrylonitrile-butadiene-styrene), and PC (polycarbonate)). The production of polymeric materials usually involves including additives, e.g. pigments, plasticizers, stabilizers and fillers, which change the properties of these materials.

Paints and finishing products - This includes liquid, viscous or solid powder products that form a solid film when a thin layer is applied to a surface. They are used to protect and add color to objects or surfaces.

Paint and printing - This includes products to copy text or pictures to materials (surface), using printers or other graphic machines.

Adhesives and resins – Hot-melt and liquid forms, such as solvent-based adhesives (for example, polychloroprene-based – CR and polyurethane-based – PU) and water-based adhesives (for example, polyvinyl acetate-based – PVA and polyurethane-based – PU).

Note: If you have difficulty classifying the product within the listed groups, please contact Renner’s Chemical Management team or the designated laboratory.

Note: If you have difficulty classifying the product within the listed groups, please contact Renner’s Chemical Management team or the designated laboratory.

5.2 Matrix of Restricted Substance Tests

The Matrix of Restricted Substance Tests, established by Lojas Renner S.A., is based on the historical record or likelihood of incidents and the critical or severity level of each substance or class of substances listed, in different materials.

The Test Matrix was developed, together with the SENAI Institute of Leather Technology and the Environment, using various sources of information and over two decades of experience analyzing a wide range of materials.

The Matrix was developed to help brands and suppliers manage chemical risks effectively.

The Test Matrix uses the following color codes:

	Red = Higher risk / testing mandatory. One test report must be submitted each year.
	Yellow = Lower risk / testing recommended. Testing is recommended and the company may ask for a report at any time.
	White = Lowest risk / testing not required. Testing may either be according to the supplier's criteria or to the company's requirements.

White boxes indicate that the risk that there will be any of these substances is low. It is unlikely that these substances will be found in any materials produced according to best chemical management and control practices, however, suppliers are still responsible for ensuring that their materials and finished products meet the limits for these chemicals.

The minimum expected standard is that the tests listed in the Test Matrix are carried out.

Matrix of Restricted Substance Tests for Products

Substance	Textiles			Synthetic Leather	Leather	Natural Materials	Metals	Other: porcelain, glass, crystal, ceramics, etc.	Plastics, Thermoplastics and Polymers								Paints and Other Coating Products	Inks and Prints	Adhesives and Resins
	Natural Fibers	Synthetic Fibers	Mixed Fibers						EVA	Polyurethane Foam	PU & PTU, not including Foam or Synthetic Leather	PVC	Polycarbonate and epoxy materials	ABS	Rubber	All other Foams, Plastics and Polymers			
Acetophenone and 2-Phenyl-1-Propanol																			
Alkylphenols and alkylphenol ethoxylates																			
Azo-amines and arylamine salts	A	A	A	A	A	A											A	A	
Chlorinated benzenes and toluenes		A	A	A															
Bisphenols									B	B	B	B	B	B	B	B			
Preservatives	F	F	F	F														F	
Chlorophenols																			
Vinyl Chloride																			
Volatile Organic Compounds	A	A	A																
Dyes (Forbidden and Disperse)																			
Dimethyl fumarate																			
Styrene - Free																			
Formaldehyde						C													
Phthalates					D	D	D												
Polycyclic aromatic hydrocarbons					G				G	G	G	G			G	G			
Heavy metals - Chromium 6	E																		
Heavy metals - Soluble																			
Heavy metals - Total																			
Heavy metals - Nickel Release																			
N-Nitrosamines																			
Organotins																			
Chlorinated Paraffins																			
Perfluorinated and polyfluorinated compounds (PFCs)	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
Residual Solvents																			
Quinoline																			
UV Absorbers / Stabilizers																			
Flame Retardants	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
pH value																			
Cyclosiloxanes																J			

Key:

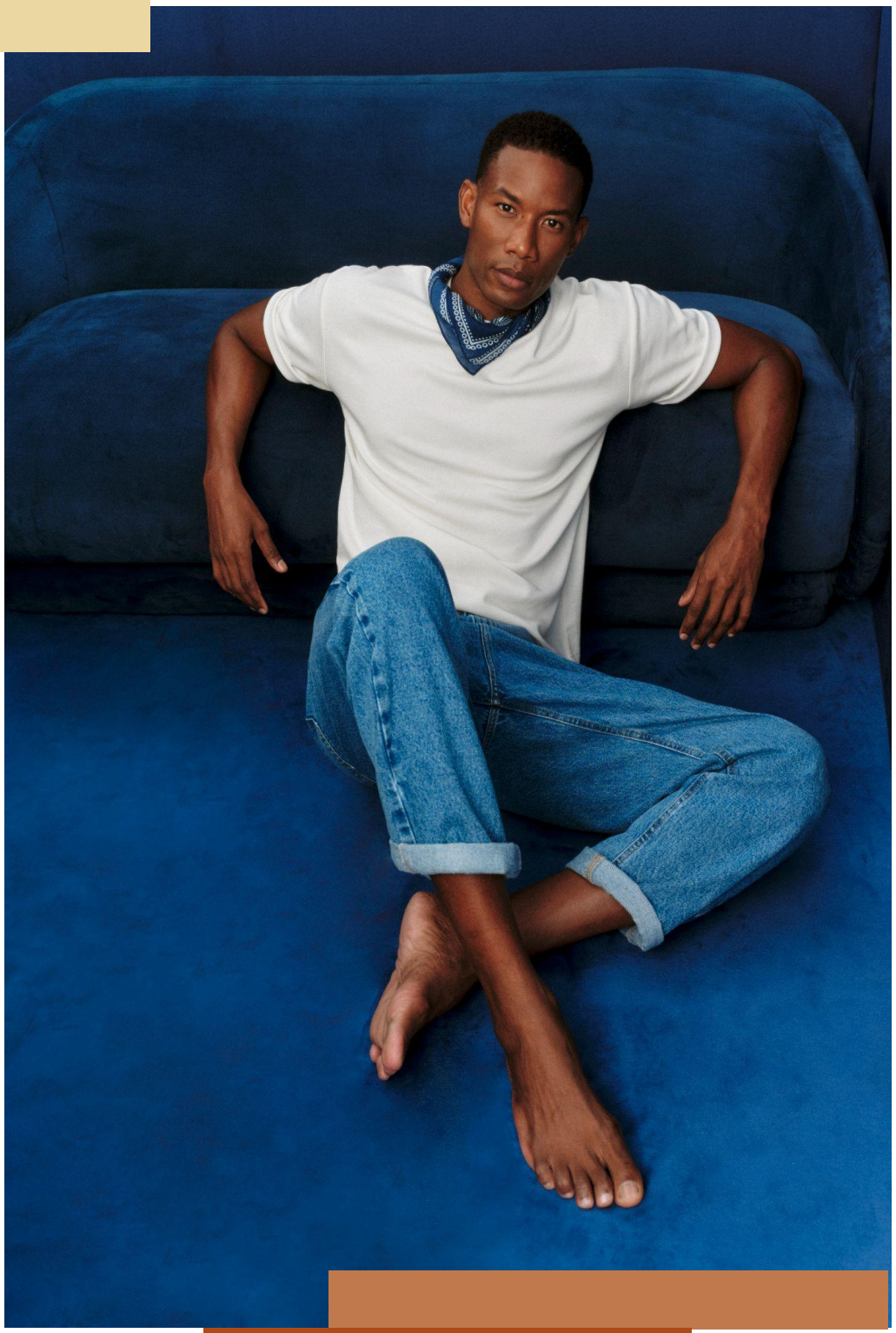
A: Dyed/colored materials only
B: Items for babies that could be chewed or sucked
C: Paper, wood or straw only
D: Only coated materials (paint, varnish or other coating)
E: Mandatory for Wool
F: OPP Only
G: Mainly black polymeric materials
H: Mandatory if given a fluorinated finish (water repellent, Teflon etc.)
I: Only if Flame Retardant use is suspected
J: for silicone polymers

Renner classifies materials by category, as described in item 5.2 and listed in the Test Matrix. However, there are complex components and materials that are not easily categorized, as well as material combinations that cannot be mechanically separated, such as bonded materials. In these cases, tests may be carried out on composite samples, applying the set of tests required for each type of material.

The Company strongly encourages **suppliers to do more than the minimum amount of testing listed here for the restricted substance limits set by Renner**, in order to **ensure compliance**, regardless of the limits listed in this Manual.

5.3 Sampling and Testing a Product

Samples to be tested must be taken from the finished product. Tests must be carried out according to the type of material used in its components.



Renner will only accept test reports from laboratories approved by the **company[2].**

Tests must be carried out in accordance with the “Test Method” listed in item 5.4 of this manual. Laboratories must use the method described in the most current version of the standard and describe it in the Test Report.

Laboratories must ensure that the “Limit of Quantification” (LoQ) is equal to or lower than the limit set by Renner (“Renner Limit”) in item 5.4 of this manual. Laboratories must state the LoQ of the method for each test in the test report.

Chemical products (paints, finishing products, adhesives) must have already been applied to the material to be used in the finished article (fabric, paper, polymer, etc.) when testing these. This must replicate the same process to be used in manufacturing.

If any material is not listed in this document, please consult the laboratory on the best testing method.

2 Approved laboratories:

- **SENAI Institute of Leather Technology and the Environment**
  Email: laboratorios.couro@senairs.org.br / Phone No. (51) 3904-2637
  Rua Gregório de Mattos, 111, Centro. Estância Velha/RS - ZIP Code 93600-440
- **SGS do Brasil Ltda**
  Email: br.comcrssoft@sgs.com / Phone No. (11) 2664-9595
  Av. Piracema, 1341, Galpão Horizon, 2nd Floor, Part A, Tamboré, Barueri/SP – ZIP Code 06460-030

Example of garment for testing:

5.4 RSL - Renner Restricted Substances List

The Renner Restricted Substances List describes the substances that the Company needs to be controlled and their respective CAS (Chemical Abstracts Service) registration numbers.

The “Potential Origins” column is used to suggest where these restricted substances might be found in the production of materials. However, it is only a guide and not intended to be comprehensive. They may originate from other sources, and suppliers must consider all possibilities.

The test results from the materials and products must be compared with the “RENNER LIMITS” for each substance and must be within these or, at most, equal to the maximum permitted value.

If any tests are failed, the supplier must contact Renner’s Chemical Management team to determine the appropriate course of action.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
1. Acetophenone and 2-Phenyl-2-Propanol				
Acetophenone[1]	98-86-2	50 ppm each	Extraction in acetone or methanol GC/MS, sonication for 30 minutes at 60° C	Potential breakdown products in EVA foam when using certain crosslinking agents, including Dicumyl Peroxide. Risks: Skin and eye irritation, harmful to aquatic organisms.
2-Phenyl-2-Propanol	617-94-7			
2. Alkylphenols (Aps) and Alkylphenol Ethoxylates (APEOs)				
Nonylphenol (NP)	Various – Search by name	Total (NP, OP): 10 ppm	ISO 18218-1 ISO 18218-2 ISO 18254-1 (synthetic leather, textiles, polymers) ISO 18857-2 (adhesives) Textiles and Leather: EN ISO 21084 (NP & OP)	Degreasing agents, greases, humectants, water repellents, emulsifiers, emulsified products, resins, softeners, dye dispersants, impregnants, detergents, surfactants etc. Risks: Endocrine disruptor, harmful to aquatic organisms.
Octylphenol (OP)	Various – Search by name			
Nonylphenol ethoxylates (NPEOs)	Various – Search by name	Total (NPEO, OPEO): 100 ppm		
Octylphenol ethoxylates (OPEOs)	Various – Search by name			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
3. Azo-amines and Arylamine Salts				
4-Aminobiphenyl[1]	92-67-1	20 ppm each	All materials, except leather: ISO 14362-1 ISO 14362-3 (p-Aminoazobenzene) Leather: ISO 17234-1 ISO 17234-2 (p-Aminoazobenzene)	These come from dyes and pigments that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleaved amines are restricted. Azo dyes that release these amines should no longer be used. Risks: Carcinogenic
Benzidine [1]	92-87-5			
4-Chloro-o-toluidine	95-69-2			
2-Naphthylamine[1]	91-59-8			
o-Aminoazotoluene	97-56-3			
2-Amino-4-nitrotoluene[1]	99-55-8			
p-Chloraniline	106-47-8			
2,4-Diaminoanisole	615-05-4			
4,4’-Diaminodiphenylmethane[1]	101-77-9			
3,3’-Dichlorobenzidine[1]	91-94-1			
3,3’-Dimethoxybenzidine	119-90-4			
3,3’-Dimethylbenzidine[1]	119-93-7			
3,3’-dimethyl-4,4’-diaminodiphenylmethane	838-88-0			
p-Cresidine	120-71-8			
4,4’-Methylen-bis(2-chloraniline)[1]	101-14-4			
4,4’-Oxydianiline	101-80-4			
4,4’-Thiodianiline	139-65-1			
o-Toluidine [1]	95-53-4			
2,4-Toluenediamine	95-80-7			
2,4,5-Trimethylaniline	137-17-7			
2,4 Xylidine	95-68-1			
2,6 Xylidine	87-62-7			
2-Methoxyaniline (= o-Anisidine)[1]	90-04-0			
4-Aminoazobenzene	60-09-3			
4-Chloro-o-toluidinium chloride	3165-93-3			
2-Naphthylammoniumacetate	553-00-4			
4-Methoxy-m-phenylene diammonium sulphate	39156-41-7			
2,4,5-Trimethylaniline hydrochloride	21436-97-5			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
4. Chlorinated Benzenes and Toluenes (Chlorinated Organic Compounds)				
2-Chlorotoluene1	95-49-8	1 ppm (total)	All materials: EN 17137	Chlorinated Organic Compounds can be used as carriers in the dyeing process of polyester or wool/polyester fibers. They can also be used in adhesives, cleaners and primers Risks: Skin, eye, and respiratory tract irritation. May affect fertility.
3-Chlorotoluene	108-41-8			
4-Chlorotoluene	106-43-4			
2,3-Dichlorotoluene	32768-54-0			
2,4-Dichlorotoluene	95-73-8			
2,5-Dichlorotoluene	19398-61-9			
2,6-Dichlorotoluene	118-69-4			
3,4-Dichlorotoluene	95-75-0			
2,3,6-Trichlorotoluene	2077-46-5			
2,4,5-Trichlorotoluene	6639-30-1			
2,3,4,5-Tetrachlorotoluene	76057-12-0			
2,3,4,6-Tetrachlorotoluene	875-40-1			
2,3,5,6-Tetrachlorotoluene	1006-31-1			
Pentachlorotoluene	877-11-2			
1,3-dichlorobenzene	541-73-1			
1,4-dichlorobenzene[1]	106-46-7			
1,2,3-Trichlorobenzene	87-61-6			
1,2,4-Trichlorobenzene[1]	120-82-1			
1,3,5-Trichlorobenzene	108-70-3			
1,2,3,4-Tetrachlorobenzene	634-66-2			
1,2,3,5-Tetrachlorobenzene	634-90-2			
1,2,4,5-Tetrachlorobenzene	95-94-3			
Pentachlorobenzene	608-93-5			
Hexachlorobenzene[1]	118-74-1			
p-Chlorobenzotrichloride	5216-25-1			
Benzotrichloride[1]	98-07-7			
Benzyl Chloride[1]	100-44-7			
1,2-dichlorobenzene[2]	95-50-1	10 ppm		

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
5. Bisphenols				
Bisphenol-A (BPA)	80-05-7	Textiles and Leather: 10 ppm (BPA) Items intended to come in contact with the mouth: 1 ppm Other Materials: 1000 ppm	Leather: ISO 11936 Other Materials: Extraction: 1 g of sample / 20 ml of THF, sonication for 60 minutes at 60°C, then add methanol or acetonitrile for precipitation before analysis by HPLC-MS. Note for textiles: For precipitation, transfer the extract to another vial and add methanol or acetonitrile. Falsely elevated results may occur if the textile sample comes into contact with the precipitation solvent.	BPA may be used in the production of epoxy resins, polycarbonate plastics, flame retardants, and PVC. BPS may be used as a substitute for BPA in specific applications, including thermal receipt paper. BPS and BPF may be found in dye-fixing agents for polyamide and in synthetic tanning agents. For leather based on sulfone and phenol. BPA and BPS may also be present in recycled polymers and paper. Risks: Endocrine disruptor, carcinogenic.
Bisphenol S (BPS)	80-09-1	Leather: 800ppm Textiles: 200ppm Other Products: 1000 ppm each.		
Bisphenol B (BPB)	77-40-7			
Bisphenol F (BPF)	620-92-8			
6. Preservatives				
4-chloro-3methylphenol (PCMC)	59-50-7	1000 ppm each	ISO 13365 ISO 17070 or DIN 50009 (OPP)	They can be used on leather for their preservative properties. OPP can be used as a carrier in the polyester dyeing processes Risks: Skin, eye, and respiratory tract irritation.
Ortho-phenylphenol (OPP)	90-43-7			
Octylisothiazolinone (OIT)	26530-20-1			
2-(Thiocyanomethylthio)-benzothiazole (TCMTB)	21564-17-0			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
7. Chlorophenols				
2,3,4-Trichlorophenol (TriCP)	15950-66-0	0.5 ppm each PCP and TeCP are prohibited for items for babies.	All materials: ISO 17070 DIN 50009 ISO 17134-2	May be used as preservatives or pesticides. Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.
2,3,5-Trichlorophenol (TriCP)	933-78-8			
2,3,6-Trichlorophenol (TriCP)	933-75-5			
2,4,5-Trichlorophenol (TriCP)	95-95-4			
2,4,6-Trichlorophenol (TriCP)	88-06-2			
3,4,5-Trichlorophenol (TriCP)	609-19-8			
2,3,4,5-Tetrachlorophenol (TeCP)	4901-51-3			
2,3,4,6-Tetrachlorophenol (TeCP)	58-90-2			
2,3,5,6-Tetrachlorophenol (TeCP)	935-95-5			
Pentachlorophenol (PCP) [1]	87-86-5			
8. Vinyl Chloride				
Vinyl Chloride [2]	75-01-4	1 ppm	ISO 6401	Vinyl chloride is a precursor to polymerization and can be found in PVC materials (injected parts, laminates etc.). Risks: Carcinogenic.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
9. Volatile Organic Compounds				
Benzene[1]	71-43-2	5 ppm	ISO 16189 EPA 5021 EPA 8260 For general VOC screening: GC/MS headspace 45 minutes at 120° C	They are associated with solvent-based processes, such as polyurethane coatings, leather finishes, solvents in paints, and adhesives. They should not be used for any kind of facility cleaning or spot cleaning. These VOCs should not be used in textile auxiliary chemical preparations. Risks: Carcinogenic, risk of nervous system damage
Carbon Disulfide[2]	75-15-0	500 ppm (total)		
Carbon tetrachloride[2]	56-23-5			
Clorofórmio2	67-66-3			
Ciclohexanona1	108-94-1			
1,2,dicloroetano2	107-06-2			
1,1,dicloroetileno2	75-35-4			
Etilbenzeno2	100-41-4			
Pentachloroethane	76-01-7			
1,1,1,2- Tetrachloroethane	630-20630-6			
1,1,2,2- Tetrachloroethane[1]	79-34-5			
Tetrachloroethylene (PERC) [2]	127-18-4			
Toluene[2]	108-88-3			
1,1,1- Trichloroethane[2]	71-55-6			
1,1,2- Trichloroethane[2]	79-00-5			
Trichloroethylene[2]	79-01-6			
Xylenes (meta-, ortho-, para-) [2]	1330-20-7 108-38-3 95-47-6 106-42-3			
1,2,3-Trichloropropane	96-18-4			
1,2-Dichloropropane	78-87-5			
2-Ethoxyethyl acetate	111-15-9	500 ppm (total)	EPA 5021 EPA 8260 For general VOC screening: GC/MS headspace 45 minutes at 120° C	They are associated with solvent-based processes, such as polyurethane coatings, leather finishes, solvents in paints, and adhesives. They should not be used for any kind of facility cleaning or spot cleaning. These VOCs should not be used in textile auxiliary chemical preparations. Risks: Carcinogenic, risk of nervous system damage
2-Ethylhexanoic acid	149-57-5			
Aniline	62-53-3			
Bis(2-methoxyethyl) ether	111-96-6			
Isophorone	78-59-1			
Phenol	108-95-2			
Tetrahydrofuran (THF)	109-99-9			
1-Bromopropane	106-94-5			
1-PG2MEA 1-Propanol, 2-methoxy acetate	70657-70-4			
2-(2-Methoxyethoxy)ethanol	111-77-3			
2,4-Toluene diisocyanate	584-84-9			
2-Ethoxyethanol	110-80-5			
2-Methoxyethanol – EGME (Ethylene glycol monomethyl ether)	109-86-4			
2-Methoxypropan-1-ol	1589-47-5			
EGDME (Ethylene glycol dimethyl ether)	110-71-4			
EGMEA (Ethylene glycol monomethyl ether acetate)	110-49-6			
Hexachloroethane	67-72-1			
Methylene chloride (Dichloromethane)	75-09-2			
n-Hexane	110-54-3			
TGDME (Triethylene glycol dimethyl ether)	112-49-2			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
10. Dyes (Forbidden and Disperse)				
Blue 1	2475-45-8	5 ppm each	All materials: DIN 54231 ABNT NBR 16503	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic and mixed fibers (e.g., polyester, acetate, polyamide). Risks: Allergenic, carcinogenic.
Blue 2	2475-46-9			
Blue 35A & 35B	56524-77-7 56524-76-6			
Blue 106	12223-01-7			
Blue 124	12223-01-7			
Yellow 3	2832-40-8			
Orange 3	730-40-5			
Orange 37/76/59	12223-33-5 13301-61-6 51811-42-8			
Red 1	2872-52-8			
Blue 7	3179-90-6	30 ppm each (Testing only upon request)		
Blue 26	3860-63-7			
Blue 102	12222-97-8			
Brown 1	23355-64-8			
Orange 1	2581-69-3			
Orange 11	82-28-0			
Orange 149	85136-74-9			
Red 11	2872-48-2			
Red 17	3179-89-3			
Red 151	61968-47-6			
Yellow 1	119-15-3			
Yellow 7	6300-37-4			
Yellow 9	6373-73-5			
Yellow 23	6250-23-3			
Yellow 39	12236-29-2			
Yellow 49	54824-37-2 6858-49-7			
Yellow 56	54077-16-6			
Red 26	3761-53-3			
Basic Red 9	569-61-9			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
10. Dyes (Forbidden and Disperse)				
Basic Green 4	569-64-2 2437-29-8 10309-95-2	30 ppm each (Testing only upon request)	All materials: DIN 54231 ABNT NBR 16503	Disperse dyes are a class of water-insoluble dyes that penetrate the fiber system of synthetic or manufactured fibers and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic and mixed fibers (e.g., polyester, acetate, polyamide). Risks: Allergenic, carcinogenic.
Basic Violet 3	548-62-9			
Basic Violet 14	632-99-5			
Basic Blue 26	2580-56-5			
Direct Black 38	1937-37-7			
Direct Blue 6	2602-46-2			
Direct Red 28	573-58-0			
Direct Brown 95	16071-86-6			
4-Dimethylaminoazobenzene (Solvent Yellow 2)	60-11-7			
Solvent Blue 4	6786-83-0			
4,4'-bis(dimethylamino)-4"-(methylamino)trityl alcohol	561-41-1			
Dyes, Navy Blue - Comp. 1: C39H23ClCrN7O12S.2Na	118685-33-9			
Dyes, Navy Blue - Comp. 2: C46H30CrN10O20S2.3Na	None Allocated			
11. Dimethyl fumarate				
Dimethylfumarate (DMFu)	624-49-7	0.1 ppm	Textiles: EN 17130 All other materials: CEN ISO/TS 16186	Anti-mold agent. Risks: Skin, eye, and respiratory tract irritation. Liver and kidney damage.
12. Styrene - Free				
Styrene - Free[2]	100-42-5	500 ppm	Extraction in Methanol GC/MS, sonication at 60° C for 60 minutes	Styrene is a precursor for polymerization and may be present in various Styrene copolymers like plastic buttons. Risks: Skin, eye, and respiratory tract irritation. May affect the central nervous system.
13. Formaldehyde				
Formaldehyde[2]	50-00-0	Adults and Children: 75 ppm Babies: 16 ppm	All materials, except leather: ISO 14184-1 Leather: ISO 17226-1 or ISO 17226-2	Used in textiles as an anti-creasing and anti-shrinking agent. In leather, it can be found in preservatives, softeners, retanning agents and antimicrobial compounds. Risks: Skin, eye, and respiratory tract irritation. May cause damage to the liver, kidneys, heart, and central nervous system.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
14. Phthalates				
Di(2-ethylhexyl)-phthalate (DEHP)[1]	117-81-7	500 ppm each Total: 1000 ppm	All materials, except textiles: CPSC-CH-C1001- 09.4 Textiles: ISO 14389 ABNT NBR 16525	Esters of ortho-phthalic acid (Phthalates) are a class of organic compounds, commonly added to plastics to increase flexibility. They are sometimes used to facilitate the molding of plastic by decreasing its melting temperature. Phthalates can be found in: Flexible plastic components (e.g., PVC), Print pastes, Paint, Varnishes, Adhesives, Plastic buttons, Plastic sleevings, Polymeric coatings. Risks: Endocrine disruptor, affects the reproductive system.
Butylbenzylphthalate (BBP)	85-68-7			
Dibutylphthalate (DBP)[1]	84-74-2			
Diisobutylphthalate (DIBP)	84-69-5			
Di-n-hexylphthalate (DnHP)	84-75-3			
Di-n-pentyl phthalate (DPENP)	131-18-0			
Dicyclohexyl phthalate (DCHP)	84-61-7			
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6			
Bis(2-methoxyethyl) phthalate	117-82-8			
Diisopentyl phthalate (DIPP)	605-50-5			
Diisohexyl phthalate (DIHxP)	68515-50-4			
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4			
1,2-Benzenedicarboxylic acid Dipentyl ester, branched and linear	84777-06-0			
1,2-Benzenedicarboxylic Acid Esters, Di-C6-10-Alkyl or Mixed Decyl and Hexyl & Octyl Diesters with □ 0.3% Dihexyl Phthalate; 1,2-Benzenedicarboxylic Acid, Mixed Decyl, Hexyl, and Octyl Diesters; 1,2-Benzenedicarboxylic Acid, Di-C6-10-Alkyl Esters	68648-93-1 68515-51-5			
n-Pentyl-isopentylphthalate (nPIPP)	776297-69-9			
Di-Iso-nonylphthalate (DINP)	28553-12-0			
Di-n-octylphthalate (DNOP)	117-84-0			
Diisodecylphthalate (DIDP)	26761-40-0			
Diethylphthalate (DEP)[1]	84-66-2			
Dimethylphthalate (DMP)[1]	131-11-3			
Dipropyl phthalate (DPRP)	131-16-8			
Diisooctyl phthalate (DIOP)	27554-26-3			
Diisohexyl phthalate (DIHxP)	71850-09-4			
Bis(2-ethylhexyl) tetrabromophthalate	26040-51-7			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product		Test Method	Potential Origins
15. Polycyclic aromatic hydrocarbons (PAHs)					
Acenaphtene	83-32-9	No individual restriction	10 ppm Total Sum:	All materials: AFPS GS EN 17132 ISO 16190 ZEK 01.4	PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from the thermal decomposition of recycled materials during reprocessing Naphthalene: Dispersing agents for textile dyes may contain high residual Naphthalene concentrations due to the use of Naphthalene derivatives. Risks: Carcinogenic, respiratory, cardiovascular, and reproductive issues.
Acenaphthylene	208-96-8				
Anthracene	120-12-7				
Benzo(g,h,i)perylene	191-24-2				
Fluorene	86-73-7				
Fluoranthene	206-44-0				
Indeno(1,2,3-cd)pyrene	193-39-5				
Naphthalene[1]	91-20-3				
Phenanthrene	85-01-8				
Pyrene	129-00-0				
Benzo(a)anthracene[1]	56-55-3	1 ppm each Child care articles: 0.5 ppm			
Benzo(a)pyrene[1]	50-32-8				
Benzo(b)fluoranthene[1]	205-99-2				
Benzo(e)pyrene	192-97-2				
Benzo(j)fluoranthene	205-82-3				
Benzo(k)fluoranthene	207-08-9				
Chrysene[1]	218-01-9				
Dibenzo(a,h)anthracene	53-70-3				
16. Heavy metals - Chromium 6					**16. Heavy metals - Chromium 6**
Hexavalent chromium [a]	18540-29-9	Leather: 3 ppm after accelerated aging Textiles: 1 ppm		Leather: ISO 17075-1 ISO 17075-2 ISO 10195 Method A2 for aging test (80° C, 24h) Textiles: EN 16711-2 with ISO 17075-1 or ISO 17075-2	Leather: In case of Chromium 3 to 6 oxidation. Though typically associated with leather tanning, Chromium 6 also may be used in the “after-chroming” process for wool dyeing (Chrome salts applied to acid-dyed wool to improve fastness). Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
17. Heavy metals - Soluble				
Antimony (Sb)[1]	7440-36-0	All, except jewelry: 30 ppm For jewelry and costume jewelry: 60 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17	Found in or used as a catalyst in the polymerization of polyester, flame retardants, fixing agents, pigments and alloys. Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.
Arsenic (As)	7440-38-2	All, except jewelry: 0.2 ppm For jewelry and costume jewelry: 20 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17	It can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics. Risks: Carcinogenic.
Barium (Ba)[1]	7440-39-3	All, except jewelry: 1000 ppm For jewelry and costume jewelry: 1000 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17	It can be used in pigments for inks, plastics and surface coatings, as well as in dyeing, mordants, filler in plastics, textile finishes, and leather tanning. Risks: Skin, eye, and respiratory tract irritation.
Cadmium (Cd)[1]	7440-43-9	All, except jewelry: 0.1 ppm For jewelry and costume jewelry: 40 ppm for children and 75 ppm for adults	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17 Textiles: ABNT NBR 16498	It may be used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints. Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.
Cobalt (Co)[1]	7440-48-4	All, except jewelry: Adults: 4 ppm Children and Babies: 1 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17	Cobalt and its compounds can be used in alloys, pigments, dyestuffs and in the production of plastic buttons. Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.
Copper (Cu) [1]	7440-50-8	All, except jewelry: Adults: 50 ppm Children and Babies: 25 ppm Note: There is no limit for metal parts.	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17	Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent. Risks: Skin, eye, and respiratory tract irritation.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
17. Heavy metals - Soluble				
Lead (Pb) [2]	7439-92-1	All, except jewelry: Adults and Children: 1 ppm Babies: 0.2 ppm For jewelry and costume jewelry: 90 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17 Textiles: ABNT NBR 16498	May be associated with alloys, plastics, paints, inks, pigments and surface coatings. Risks: Skin, eye, and respiratory tract irritation. Neurological issues. Carcinogenic.
Chrome (Cr)[1]	7440-47-3	Textiles: 2 ppm (adults), 1 ppm (babies) Leather articles for babies: 60 ppm Coatings / Paints for Babies: 60 ppm For jewelry and costume jewelry: 60 ppm	All materials, except leather and jewelry: EN 16711-2 Leather: ISO 17072-1 Jewelry: CPSC-CH-E1003-09.1 or ASTM F2923 / ASTM F963-17 Textiles: ABNT NBR 16498	It can be used as dyeing additives; dyefixing agents; colorfastness aftertreatments; dyes for wool, silk, and polyamide (especially dark shades); and leather tanning. Risks: Skin, eye, and respiratory tract irritation.
Nickel (Ni)[1]	7440-02-0	All, except metallic parts: 1 ppm	All materials, except leather: EN 16711-2 Leather: ISO 17072-1 Textiles: ABNT NBR 16498	It can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys. Risks: Skin, eye, and respiratory tract irritation.
Selenium (Se)[1]	7782-49-2	All materials: 500 ppm	All materials, except leather: EN 16711-2 Leather: ISO 17072-1	May be found in synthetic fibers, paints, inks, plastics and metal trims. Risks: May cause gastrointestinal issues, nausea, diarrhea, and vomiting.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
18. Heavy metals - Total				
Arsenic (As)	7440-38-2	All materials: 100 ppm	All materials, except leather: EN 16711-1 Leather: ISO 17072-2	It can be used in preservatives, pesticides, and defoliants for cotton, synthetic fibers, paints, inks, trims, and plastics. Risks: Carcinogenic.
Cadmium (Cd)[1]	7440-43-9	All materials: 40 ppm	All materials, except leather: EN 16711-1 Leather: ISO 17072-2 Non-metals: CPSC-CH-E1002-08.3 Metals: CPSC-CH-E1001-08.3 Paints and Coatings: CPSC-CH-E1003-09.1	It may be used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints. Risks: Skin, eye, and respiratory tract irritation. Carcinogenic.
Lead (Pb) [2]	7439-92-1	All materials: 90 ppm Note: Crystal or “lead glass” is exempt from lead restrictions.	All materials, except leather: EN 16711-1 Leather: ISO 17072-2 Non-metals: CPSC-CH-E1002-08.3 Metals: CPSC-CH-E1001-08.3 Paints and Coatings: CPSC-CH-E1003-09.1	May be associated with alloys, plastics, paints, inks, pigments and surface coatings. Risks: Skin, eye, and respiratory tract irritation. Neurological issues. Carcinogenic.
Mercury (Hg)[2]	7439-97-6**	All materials: 0.5 ppm	All materials, except leather: EN 16711-1 Leather: ISO 17072-2	It can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used in paints. Risks: Skin, eye, and respiratory tract irritation. Damage to the central nervous system and cardiovascular system. Carcinogenic.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
19. Heavy metals - Nickel Release				
Nickel (Ni)[1]	7440-02-0	Metal objects Prolonged contact with skin: 0.5 µg / cm^2 / week Glasses Frames: 0.5 µg / cm^2 / week Jewelry (metallic parts): Prolonged contact with skin: 0.5 µg / cm^2 / week For insertable objects (earrings and other piercings: 0.2 µg / cm^2 / week	EN 1811 EN 12472 Release (Glasses frames): EN 16128	It can be used for plating alloys and improving the corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys. Risks: Skin, eye, and respiratory tract irritation.
20. N-Nitrosamines2				
N-nitrosodimethylamine	62-75-9[a]	0.5 ppm each	GB / T 24153 EN ISO 19577	Can be formed as by-product in the production of rubber. Risks: Carcinogenic.
N-nitrosodiethylamine	55-18-5			
N-nitrosodipropylamine	621-64-7			
N-nitrosodibutylamine	924-16-3			
N-nitrosopiperidine	100-75-4			
N-nitrosopyrrolidine	930-55-2			
N-nitrosomorpholine	59-89-2			
N-nitroso N-methyl N-phenylamine	614-00-6			
N-nitroso N-ethyl N-phenylamine	612-64-6			
N-nitroso Methyl-ethylamine	10595-95-6			
N-nitroso diphenylamine	86-30-6			
N-nitroso dibenzylamine	5336-53-8			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
21. Organotins				
Tributyltin (TBT)	Various – Search by name	0.5 ppm each	All materials: ISO/TS 16179 or EN ISO 22744-1	Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics/ rubber, paints, metallic glitter, polyurethane products and heat transfer material. Risks: Skin, eye, and respiratory tract irritation. Toxic for aquatic organisms. Carcinogenic.
Triphenyltin (TPhT)	Various – Search by name			
Dibutyltin (DBT)	Various – Search by name	1 ppm each		
Dioctyltin (DOT)	Various – Search by name			
Monobutyltin (MBT)	Various – Search by name			
Monooctyltin (MOT)	Various – Search by name			
Tricyclohexyl tin (TCyHT)	Various – Search by name			
Trimethyltin (TMT)	Various – Search by name			
Trioctyltin (TOT)	Various – Search by name			
Tripropyltin (TPT)	Various – Search by name			
Dimethyltin (DMT)	Various – Search by name	Other Organotins: 1 ppm each		
Diphenyltin (DPhT)	Various – Search by name			
Dipropyltin (DPT)	Various – Search by name			
Monomethyltin (MMT)	Various – Search by name			
Monophenyltin (MPhT)	Various – Search by name			
Tetrabutyltin (TeBT)	1461-25-2			
Tetraethyltin (TeET)	597-64-8			
Tetraoctyltin (TeOT)	3590-84-9			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
22. Chlorinated Paraffins				
Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	85535-84-8	1000 ppm (total)	Leather: ISO 18219-1 (SCCP) ISO 18219-2 (MCCP) Textiles ISO 22818 (SCCP+MCCP)	May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production. Risks: Toxic for aquatic organisms.
Medium-chain Chlorinated Paraffins (MCCPs) (C14-C17)	85535-85-9	1000 ppm (total)		
23. Regulated Perfluorinated and Polyfluorinated Compounds (PFCs)				
23.1 All PFASs (Per- and Polyfluoroalkyl Substances) are measured by total organic fluorine	Various – Search by name	100 ppm up to 2025 50 ppm up to 2027	EN 14582 or ASTM D7359	PFOA and PFOS may occur as unintended byproducts from water, oil, and stain repellent agents. PFOA can also be used in polymers such as polytetrafluoroethylene (PTFE). Risks: Endocrine disruptor, affects fertility. Carcinogenic.
23.2 PFOS and related substances:		1 µg m^2 in total	All materials: ISO 23702-1 EN 17681-1 & EN 17681-2 Textiles: ABNT NBR 16712	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1			
Perfluorooctanesulfonic acid, potassium salt (PFOS-K)	2795-39-3			
Perfluorooctanesulfonic acid, lithium salt (PFOS-K)	29457-72-5			
Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH_{4})	29081-56-9			
Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)) 2	70225-14-8			
Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C H)) 2 5 4	56773-42-3			
Didecyldimethyl ammonium perfluorooctane sulfonate (PFOS-N(C10H21)2(CH3)2)	251099-16-8			
N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)	4151-50-2			
N-Methylperfluoro-1-octanesulfonamide (N-Et-FOSA)	31506-32-8			
2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	1691-99-2			
2-(N-Methylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)	24448-09-7			
Perfluoro-1-octanesulfonyl fluoride (POSF)	307-35-7			
Perfluorooctane sulfonamide (PFOSA)	754-91-6			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
23.3 PFOA and its salts		25 ppb in total	All materials: ISO 23702-1 EN 17681-1 & EN 17681-2 Textiles: ABNT NBR 16712	PFOA and PFOS may occur as unintended byproducts from water, oil, and stain repellent agents. PFOA can also be used in polymers such as polytetrafluoroethylene (PTFE). Risks: Endocrine disruptor, affects fertility. Carcinogenic.
Perfluorooctanoic acid (PFOA)	335-67-1			
Sodium perfluorooctanoate (PFOA-Na)	335-95-5			
Potassium perfluorooctanoate (PFOA-Na)	2395-00-8			
Silver perfluorooctanoate (PFOA-Na)	335-93-3			
Perfluorooctanoyl fluoride (PFOA-F)	335-66-0			
23.4 PFOA-related substances		1000 ppb in total		
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	39108-34-4			
Methyl perfluorooctanoate (Me-PFOA)	376-27-2			
Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5			
2-Perfluorooctylethanol (8:2 FTOH)	678-39-7			
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9			
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9			
2H,2H-Perfluorodecanoic acid (H2PFDA)	27854-31-5			
23.5 PFHxS and its salts:		25 ppb in total		
Perfluorohexane Sulfonic acid (PFHxS)	355-46-4			
Perfluorohexane Sulfonic acid, potassium salt (PFHxS-K)	3871-99-6			
Perfluorohexane Sulfonic acid, lithium salt (PFHxS-Li)	55120-77-9			
Perfluorohexane Sulfonic acid, ammonium salt (PFHxS-NH4)	68259-08-5			
Perfluorohexane Sulfonic acid, sodium salt (PFHxS-Na	82382-12-5			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
23.6 PFHxS-related substances		1000 ppb in total	All materials: ISO 23702-1 EN 17681-1 & EN 17681-2 Textiles: ABNT NBR 16712	PFOA and PFOS may occur as unintended byproducts from water, oil, and stain repellent agents. PFOA can also be used in polymers such as polytetrafluoroethylene (PTFE). Risks: Endocrine disruptor, affects fertility. Carcinogenic.
N-Methylperfluoro-1-hexanesulfonamide (N-Me-FHxSA)	68259-15-4			
Perfluorohexane sulfonamide (PFHxSA)	41997-13-1			
23.6 C9 - C14 PFCAs and their salts		25 ppb in total		
Perfluorononanoic Acid (PFNA, C9-PFCA)	375-95-1			
Perfluorodecanoic Acid (PFDA, C10-PFCA)	335-76-2			
Perfluoroundecanoic Acid (PFUnA, C11-PFCA)	2058-94-8			
Perfluorododecanoic Acid (PFDoA, C12-PFCA)	307-55-1			
Perfluorotridecanoic Acid (PFTrDA, C13-PFCA)	72629-94-8			
Perfluorotetradecanoic Acid (PFTeDA, C14-PFCA)	376-06-7			
Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-DMOA)	172155-07-6			
23.7 C9-C14 PFCA-related substances		25 ppb in total		
1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)	17741-60-5			
1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)	2144-54-9			
1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)	865-86-1			
2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)	34598-33-9			
2-Perfluorooctylethanol (8:2 FTOH)	678-39-7			
1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)	39239-77-5			
1H,1H,2H,2H-Perfluorododecanesulphonic acid (10:2 FTS)	120226-60-0			
1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)	2043-54-1			
1H,1H,2H,2H-Perfluorotetradecyl iodide (12:2 FTI)	30046-31-2			

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
23.8 PFHxA, Its Salts, and Related Substances				
Perfluorohexanoic Acid (PFHxA, C6-PFCA)	307-24-4	In anticipation of EU Limits: PFHxA and its salts: 25 ppb. PFHxS-related substances 1000 ppb.	All materials: ISO 23702-1 EN 17681-1 & EN 17681-2 Textiles: ABNT NBR 16712	PFOA and PFOS may occur as unintended byproducts from water, oil, and stain repellent agents. PFOA can also be used in polymers such as polytetrafluoroethylene (PTFE). Risks: Endocrine disruptor, affects fertility. Carcinogenic
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	27619-97-2			
1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)	647-42-7			
24. Residual Solvents				
Dimethylformamide (DMFa)[2]	68-12-2	500 ppm	Textiles: EN 17131 All other materials: ISO TS 16189	Solvent used in plastics, rubber, and polyurethane (PU) coating. Risks: Skin, eye, and respiratory tract irritation.
Formamide[1]	75-12-7	1000 ppm each		Byproduct from the production of EVA foam. Risks: Skin, eye, and respiratory tract irritation.
Dimethylacetamide (DMAC)[2]	127-19-5			Solvent used in the production of elastane fibers and sometimes as a substitute for DMFa. Risks: Skin, eye, and respiratory tract irritation.
N-Methyl-2-pyrrolidone (NMP)[1]	872-50-4			Industrial solvent used in the production of water-based polyurethanes and other polymeric materials. May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper. Risks: Skin, eye, and respiratory tract irritation. Toxic for aquatic organisms. May affect fertility.
25. Quinoline				
Quinoline	91-22-5	50 ppm	All materials: DIN 54231	Found as an impurity in polyester and some dyestuffs. Risks: Eye irritation. Toxic for aquatic organisms.

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
26. UV Absorbers / Stabilizers				
UV 320	3846-71-7	1000 pm	EN 62321-6 ISO 24040	PU foam materials such as open cell foams for padding. Used as UV Absorbers for plastics (PET, PC, PA, ABS, and other polymers), rubber, polyurethane. Risks: Risk to the environment.
UV 326	3896-11-5			
UV 327	3864-99-1			
UV 328	25973-55-1			
UV 350	36437-37-3			
27. Flame Retardants				
Decabromodiphenyl ethane (DBDPE)	84852-53-9	10 ppm each	All materials: ISO 17881-1 & ISO 17881-2	Flame retardant chemicals are rarely used to meet the inflammability requirements of children's clothing or adult products. They should no longer be used on clothing and footwear. Risks: Endocrine disruptor. Carcinogenic.
Pentabromodiphenyl ether (PentaBDE)	32534-81-9			
Octabromodiphenyl ether (OctaBDE)	32536-52-0			
Decabromodiphenyl ether (DecaBDE)	1163-19-5			
All other Polybrominated diphenyl ethers (PBDEs)	Various			
Tetrabromobisphenol A (TBBP A)	79-94-7			
Polybromobiphenyls (PBB)	59536-65-1			
Hexabromocyclododecane (HBCDD)	3194-55-6			
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0			
Tris(1,3-dichloro-isopropyl) phosphate (TDCPP)	13674-87-8			
Trixylyl phosphate (TXP)	25155-23-1			
Tris(2,3,-dibromopropyl) phosphate (TRIS)	126-72-7			
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8			
Bis(2,3-dibromopropyl) phosphate (BDBPP)	5412-25-9			
Triphenyl phosphate (TPP)	115-86-6	500 ppm	ISO 17881-2	

RENNER RESTRICTED SUBSTANCES LIST:

Substance	CAS	Renner Limit (maximum allowable value according to relevant regulations) Maximum Value Allowed for Component Materials in the Finished Product	Test Method	Potential Origins
28. Acidic and Alkaline Substances				
pH value	N.A.	Textiles and Synthetic Leather: 4.0 – 7.5 Leather (Chromium-Tanned) 3.2 – 5.5 Leather (Other): 3.5 – 7.5	Textiles and Others: ISO 3071 Leather: ISO 4045	pH value is a characteristic number, ranging from pH 0 to pH 14, which indirectly shows the concentration of acidic or alkaline substances in a product. pH values less than 7 indicate acidic substances int he product, and values greater than 7 indicate alkaline substances. Risks: Skin irritation.
29. Cyclosiloxanes				
Octamethylcyclotetrasiloxane (D4)	556-67-2	1000 ppm each	Ultrasonic extraction with non-chlorinated organic solvent for 30 minutes at 40°C and analysis by GC-MS.	They may be present in silicone pads and as contaminants in formulations containing silicone, such as silicone softeners and those used for printing. They are SVHCs and will have their use restricted in solvents used for dry cleaning of textiles, leather, and furs in the EU as of June 6, 2026, with derogations. Risks: Endocrine disruptor, affects the reproductive system, and is potentially carcinogenic.
Decamethylcyclopentasiloxane (D5)	541-02-6			
Dodecamethylcyclohexasiloxane (D6)	540-97-6			

Notes:

[1] Compounds listed by ACGIH – American Conference of Governmental Industrial Hygienists.

[2] Compounds listed by ACGIH – American Conference of Governmental Industrial Hygienists and in Regulatory Standard No. 15 (NR-15) – Unhealthy Activities and Operations and its respective annexes.

Although Renner has not set any limits or schedule for testing, fluorinated greenhouse gases, substances that damage the ozone layer and agricultural pesticides and herbicides are also restricted and suppliers must comply with the applicable legislation.

WARNING!

Meeting the chemical input requirements under the ZDHC MRSL does not necessarily ensure that you will meet the requirements set in the Renner RSL (Item 5 of the Manual) or those in ZDHC Wastewater. It is up to each supplier to assess their processes, raw materials and inputs in relation to any risks involving substances, whether intentional or unintentional, as well as possible contamination or formation of substances due to the conditions during their processes.

6. Dealing with non-conformities

An annual sampling will be carried out for each supplier in order to verify the effectiveness of chemical management. If a failure occurs and non-compliance with the management requirements applicable to the assessed processes is identified, the supplier may become ineligible for inclusion in the supply chain for new developments until compliance with the management requirements is proven.

Appendix I

Statement of Compliance with the Renner Restricted Substances List

We confirm that we are aware of the technical requirements in the Lojas Renner Restricted Substances Manual – Version 5, which provides information on managing, controlling and monitoring restricted substances in the supply chain.

We confirm, through this document, that we:

- Ensure that all products supplied to Lojas Renner S.A. comply with the restrictions on chemicals contained in the Lojas Renner Restricted Substances Manual, as well as relevant legislation.
- Will report any issues with meeting the technical criteria within the Lojas Renner Restricted Substances Manual immediately, as well as any specific concerns about the chemistry of any materials or products or how to meet the restrictions.
- In the event that the maximum limits for one or more substances are breached, we will provide a record of the corrective action taken.
- We are aware that Lojas Renner reserves the right to periodically test samples to verify compliance with the chemical management requirements outlined in this manual. If a failure occurs and non-compliance with management requirements is confirmed, the supplier may become ineligible for new developments.

We understand that Responsible Fashion requires the commitment of the entire supply chain.

_____	_____
Full name of the Legal Representative	Full Name of the Responsible Chemist.
Position	Position
CPF	CRQ

Company Name:
Company Trade Name:
Company CNPJ No.:
Date:

Manual written by the SENAI Institute of Leather Technology and the Environment for Lojas Renner S.A.

Technical Team:

Dayene Alves Silva – dayene.silva@lojasrenner.com.br – Lojas Renner S.A.
Luana Maria Frohlich – SENAI Institute of Technology in Leather and Footwear
Lucas Zoldan – SENAI Institute of Technology in Leather and Footwear
Paula Restelli – SENAI Institute of Technology in Chemistry and Environment

LOJAS RENNER S.A.

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Valid until 2027