



H&M GROUP CHEMICAL RESTRICTIONS 2022

MRSL and RSL

Textile Products, Accessories, Footwear, Bags and Belts

Valid for all brands in H&M Group.
Group Compliance and Global Sustainability Department



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General

H&M Group Chemical Restrictions consists of 12 parts:

- i. Aerosol Dispensers
- ii. **Textile products, Accessories, Footwear, Bags and Belts (including [ZDHC MRSL 2.0](#) and [AFIRM RSL](#))**
- iii. Candles
- iv. Chemical Products
- v. Cosmetic Products
- vi. Electrical and Electronic Products and Batteries
- vii. Food Contact Products
- viii. Furniture
- ix. Hardline
- x. Medical Devices
- xi. Non-Commercial Goods (NCG), Construction and Packaging
- xii. Toys

Please note: If other requirements than those listed in H&M Group Chemical Restrictions exist for the same substances and product groups in ZDHC MRSL or AFIRM RSL, the requirements specified in H&M Group Chemical Restrictions takes precedence.

Please read more about H&M Group Chemical Management [here](#).

Commitment

By accepting H&M Group Standard Purchase Conditions, the Supplier commits to comply with H&M Group Chemical Restrictions. The Supplier is responsible to assure compliance and to inform all their upstream suppliers and subcontractors about its content.

By accepting H&M Group Standard Purchase Conditions, each Supplier acknowledges that H&M Group reserves the right to:

- Inspect and test any product, any part of production and/or packaging, by any listed or appropriate method, at any time or at any stage of production.
- Cancel the Order, or, if the products are already delivered, return the products to the Supplier if the product, production and/or packaging do not correspond to the H&M Group Chemical Restrictions.
- Hold the Supplier responsible for any damage caused by the ordered product if the product, production and/or packaging do not correspond to the H&M Group Chemical Restrictions.
- Receive Safety Data Sheets (SDS) for all substances and preparations (dyes, colorants, solvents, chemicals, etc.) used in the production of a specific Order.
- Request the Supplier to change substances and preparations (dyes, colorants, solvents, chemicals, etc.) used in the production to comply with H&M Group Chemical Restrictions.

In case of contradictory test results, H&M Group's test results will prevail.

Definitions

Ban	The substance must not be used in production and it must not be added to the product ¹ .
Concentration limit	The substance must not be present in the product at concentrations above this limit.
Homogeneous	Uniform composition throughout, i.e. a material that cannot be mechanically disjointed into different materials.
Not detected	The substance must not be present in the finished product at concentrations above the analytical reporting limit.
Reporting limit	Describes the level of detection times a safety factor selected by the laboratory that ensures repeatability and reproducibility.
Safety Data Sheet (SDS)	All chemicals used for H&M Group products shall have Safety Data Sheets (SDS) that meet current GHS requirements, please see AFIRM Toolkit Appendix H for guidance.

¹ Impurities at low concentrations of these substances may be accepted only if technically unavoidable due to e.g. raw materials, formation in the manufacturing process, storage or packaging.

Abbreviations

CAS no	Chemical Abstracts Service number, identification number for chemicals.
cl	Centilong
Percentage	Part weight by weight, % w/w.
ppm	Parts per million, which is the same as mg/kg.
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
SVHC	Substances of Very High Concern

1. Chemical Restrictions – Production

For Textile and Leather supply chains, manufacturing shall comply with the *Zero Discharge of Hazardous Chemicals Manufacturing Restricted Substance List 2.0* (ZDHC MRSL 2.0), found at [//mrsi.roadmaptozero.com/](https://mrsi.roadmaptozero.com/).

Compliance to ZDHC MRSL is now a Minimum Requirement (MR) in 2022. Therefore, if the production unit is found to intentionally use chemicals listed on ZDHC MRSL in production process, it will result in MR Violation.

2. Chemical Restrictions – Products

Products within the scope of H&M Group Chemical Restrictions Textile products, Accessories, Footwear, Bags and Belts shall comply with *AFIRM's Restricted Substances List (RSL)*, found at www.afirm-group.com/afirm-rsl/

3. H&M Group – Additional Requirements

Table 1. H&M Group additional requirements.

Substances and/or materials	CAS	Limit/Requirement	Test/Compliance method	Reporting limit
Biocidal compounds and biocidal claims	Various	For products: Biocide-treated articles according to definition in European Biocidal Products Regulation (BPR, Regulation (EU) 528/2012), including biocidal claims “antimicrobial”, “antibacterial”, “anti-odour”, etc. General ban for class of chemicals/treatments used for this function and their claims.	1. Input control 2. Some biocidal substances are restricted in ZDHC MRSL and AFIRM RSL; test methods for those are specified there.	-
Bisphenols				
Bisphenol A (BPA)	80-05-7	For all products, total content: 1 ppm. In polycarbonate (PC) plastics, extractable content: 1 ppm.	Total content, all materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60 degrees C, analysis with LC/MS (same as AFIRM RSL). BPA, extractable content (only PC): Extraction with artificial sweat solution ISO 105 E04 and LC/MS analysis.	1 ppm each
Bisphenol B (BPB)	77-40-7	For all products, total content: 200 ppm each.		
Bisphenol S (BPS)	80-09-1			
Bisphenol F (BPF)	620-92-8			
Bisphenol AF (BPAF)	1478-61-1			
Chlorinated bleaching agents	-	In production process: General usage ban. Finishing treatments with chlorinated bleaching agents can only be used in denim production.	Input control	
Dimethylformamide (DMFa)	68-12-2	For products and in production process: General usage ban.	According to AFIRM RSL and input control. For polyurethane (PU) materials, follow <i>Verification routine for Better PU</i> .	5 ppm
Flame retardants				
All flame retardants	Various	General ban for chemicals used for this function.	Input control	5 ppm
Flame retardants in AFIRM RSL	Various	Not detected	Product testing according to methods specified in AFIRM RSL	
Tri-o-cresyl phosphate	78-30-8			
Triphenyl phosphate (TPhP)	115-86-6			

Substances and/or materials	CAS	Limit/Requirement	Test/Compliance method	Reporting limit
Tris(1-chloro-2-propyl)phosphate (TCPP)	13674-84-5	In addition to the flame retardants listed in AFIRM RSL, these substances are also included in H&M Group testing protocol. Not detected		
Leather tanned products				
Chromium-free tanned leather	7440-47-3, 18540-29-9	<ul style="list-style-type: none"> • 500 ppm² total chromium • For products for children aged 0-3 years: chromium-free from S3 2020 • 100% of linings/skin contact are chromium-free from S3 2020 	According to AFIRM RSL Total content according to EN ISO 17072-2 ²	
Metal-free tanned leather		500 ppm ³ total metal content	For metal-free and vegetable-tanned leather: Total content according to EN ISO 17072-2 ³	
Nanomaterials “‘Nanomaterial’ means a natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50% or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm-100 nm.” ⁴	Various	For products: General usage ban.	Input control (e.g., BVE3)	
Per- and polyfluorinated compounds (PFC/PFAS)				
All per- and polyfluorinated compounds	Various	Usage ban	Input control (e.g., BVE3)	
Per and polyfluorinated compounds in AFIRM RSL Appendix A.		Not detected	Product testing according to methods specified in AFIRM RSL.	
Perfluorobutane Sulfonate (PFBS)	29420-49-3		For FTOH:	1 ppm

² EN 15987 defines chromium-free tanned leather. At H&M Group a leather containing <500 ppm is considered as chromium-free tanned leather. The standard EN ISO 17072-2 is applicable to determine chromium in chromium-free tanned leathers.

³ EN 15987 defines metal-free leather (Cr, Al, Ti, Zr, Fe). At H&M Group metal-free leather containing <500 ppm is considered as metal-free leather. The standard EN ISO 17072-2 is applicable to determine the content of tanning metals. EN 15987 defines vegetable-tanned leather. At H&M Group using vegetable tanning agents containing <500 ppm metals (Cr, Al, Ti, Zr, Fe) is considered as vegetable-tanned leather. The standard EN ISO 17072-2 is applicable to determine the content of tanning metals.

⁴ European commission recommendation on the definition of nanomaterial (2011/696/EU), Official Journal of the European Union, 20.10.2011.

Substances and/or materials	CAS	Limit/Requirement	Test/Compliance method	Reporting limit
Perfluorohexane Sulfonate (PFHxS)	3871-99-6	In addition to the PFC/PFAS listed in AFIRM RSL Appendix A, these substances are also included in H&M Group testing protocol. For products: not detected.	Extraction: ISO 23702-1; Analysis: GC/MS/MS, GC/MS or LC/MS. All others: ISO 23702-1	
Perfluoroheptane Sulfonate (PFHpS)	375-92-8			
Perfluorodecane Sulfonate (PFDS)	335-77-3 or 2806-15-7 or 2806-16-8			
Perfluorobutane Acid (PFBA)	375-22-4			
Perfluoropentane Acid (PFPA)	2706-90-3			
Perfluorohexane Acid (PFHxA)	307-24-4			
Perfluoroheptane Acid (PFHpA)	375-85-9			
Perfluorononane Acid (PFNA)	375-95-1			
Perfluorodecane Acid (PFDA)	335-76-2			
Perfluoroundecanoic Acid (PFUnA)	2058-94-8			
Perfluorododecanoic Acid (PFDoA)	307-55-1			
Perfluorotridecanoic Acid (PFTrA)	72629-94-8			
Perfluorotetradecanoic Acid (PFTeA)	376-06-7			
Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6			
7H-dodecanefluoroheptane Acid (HPFHpA)	1546-95-8			
2H,2H-perfluorodecane Acid (H2PFDA)	-			
2H,2H,3H,3H-Perfluoroundecanoic Acid (H4PFUnA)	34598-33-9			
1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6			
1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5			
1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)	2043-47-2			
1H,1H,2H,2H-Perfluoro-1-oktanol (6:2 FTOH)	647-42-7			
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1			
2-(N-methylperfluoro-FASE 1 octanesulfonamido)-ethanol (MeFOSE)	2448-09-7			
Polyvinyl chloride (PVC), polychloroprene (e.g. Neoprene) and other similar chlorinated polymers	Various	For products and in production process: General material ban.	Input control	
Potassium permanganate	7722-64-7	From order placement date (OPD) 1 January 2023: usage ban will be implemented for potassium permanganate (PP).		

Substances and/or materials	CAS	Limit/Requirement	Test/Compliance method	Reporting limit
		For & Other Stories, Weekday, COS and Arket the potassium permanganate usage ban is already valid.		
REACH SVHC and Substances defined as hazardous due to intrinsic properties Criteria for hazardous as defined in REACH Article 57.	Various	For products: General restriction of 0.1% (w/w) for all substances included in either of these. If specified elsewhere in H&M Group Chemical Restrictions, stricter limits apply.	Input control (e.g., BVE3)	
Recycled natural and synthetic textile materials				
RSL exceptions for products made of 100% mechanically recycled fibers. Provided that no additional restricted substances, as listed below, have been used after the collection of the waste, the restriction of the chemicals are as follows:				
Nonylphenol Ethoxylates (NPE) Octylphenol Ethoxylates (OPE)	Various	Total 1000 ppm	According to AFIRM RSL.	
UV absorbers/stabilisers/filters	Various	For textile products: General ban for chemicals used for this function.	Input control Some substances are included in ZDHC MRSL 2.0. Some substances are included in AFIRM RSL and can thus be product tested.	-

Additional Requirements – Cosmetic Accessories

Table 2. Additional requirements Cosmetic Accessories.

Restricted substance/property	CAS	Limit/Requirement	Test method	Reporting limit
Face/Body/Nail and Hair stickers-/decorations				
A CR (RSL) 2022 Amendment will be published during 2022.				
Cotton swabs and pads				
Plastic materials	-	Usage Ban		
Fluorescent brightening agent	-	Usage Ban	UV-lamp	-
Total viable count of yeast and mold	-	< 300 CFU/g	EN ISO 16212 / European Pharmacopeia (Ph. Eur.), 2.6.12. "Microbiological examination of non-sterile products."	
Total viable count of aerobic mezophilic bacteria	-	< 300 CFU/g	EN ISO 21149 / European Pharmacopeia (Ph. Eur.), 2.6.12. "Microbiological examination of non-sterile products."	

Restricted substance/property	CAS	Limit/Requirement	Test method	Reporting limit
<i>Metals extractable amount</i>				
Antimony (Sb)	7440-36-0	30 ppm	EN ISO 16711-2	0.1 ppm
Arsenic (As)	7440-38-2	0.2 ppm		
Barium (Ba)	7440-39-3	1000 ppm		
Cadmium (Cd)	7440-43-9	0.1 ppm		0.02 ppm
Chromium (Cr)	7440-47-3	1 ppm		0.1 ppm
Lead (Pb)	7439-92-1	0.2 ppm		
Mercury (Hg)	7439-97-6	0.02 ppm		0.02 ppm
Selenium (Se)	7782-49-2	460 ppm		0.1 ppm

Additional Requirements – Carpets and Mats (all materials)

Table 3. Additional requirements Carpets and Mats

Restricted substances	CAS	Limit/Requirement	Test method	Reporting limit
4-Phenylcyclohexene	4994-16-5	≤ 0.050 mg/m ² /h	GB 18587-2001 Grade B (products qualified in respect of limitations of emitted harmful substances)	As specified in test standard
Formaldehyde	50-00-0	≤ 0.050 mg/m ² /h		
Styrene	100-42-5	≤ 0.500 mg/m ² /h		
Volatile Organic Compounds, Total (TVOC)	-	≤ 0.600 mg/m ² /h		

4. More Information and Guidelines

The *AFIRM Group Chemistry Toolkit* shares valuable information about RSL compliance, RSL failure resolution, chemicals management, SDS and other online educational resources. More information about substances in *AFIRM RSL* can be found in *AFIRM Chemical Information Sheets*: www.afirm-group.com/publications/.