H&M GROUP CHEMICAL RESTRICTIONS2024

RESTRICTED SUBSTANCES LIST (RSL)

Hardline

Product Compliance Valid for all brands in the H&M Group

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General

H&M Group Chemical Restrictions consist of several parts regarding different product types; this document concerns Chemical Restrictions for Hardline.

An introduction to and general information about the H&M Group Chemical Restrictions are available in a separate document: *H&M Group Restricted Substance List (RSL) Introduction and Commitment - All Product Types, document ID 00432*. Please read that document and refer to the examples provided there, before proceeding with the product specific restrictions.

Each limit specified in this document is valid for homogeneous parts of the concerned product if not otherwise stated. Test methods are specified when relevant in this document. In case of undated test method, the latest version is valid.

Definitions

Concentration Limit	The substance must not be present in the product at concentrations above this limit.
Not Detected	The substance must not be present in the finished product at concentrations above the analytical reporting limit.
Usage ban	The substance must not be used in production and it must not be added to the product.[1]
Homogeneous	Uniform composition throughout, i.e. a material that cannot be mechanically disjointed into different materials.
Hardline	All hard interior/decoration products like e.g. candle holder, pot, vase, soap dispenser, hook, etc. Also other products like tents, pen holder, tape holder.
Substances defined as hazardous due to intrinsic properties.	Persistent, bioaccumulative and toxic (PBT), very persistent and very bioaccumulative (vPvB), carcinogenic, mutagenic and toxic for reproduction (CMR), endocrine disruptors (ED) or equivalent concern.

Abbreviations

CAS no	Chemical Abstracts Service number, an identification number for chemicals in this database.
CFR	Code of Federal Regulations
ppm	Parts per million, which is the same as mg/kg.
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC	Substances of Very High Concern

[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.

Requirements – All Materials

All materials				
Requirement	**CAS no**	**Limit/ Requirement**	**Test method**	**Reporting limit**
Biocidal compounds	Various	Are not allowed to be used without approval by H&M Group	Input control	N/A
Flame retardants[2]				
Tris(2,3-dibromopropyl)phosphate (TRIS)	126-72-7	Not detected	Methanol extraction and analysis with LC-MS	5 ppm
Bis(2,3-dibromopropyl)phosphate	5412-25-9			
Trixylyl phosphate (TXP)	25155-23-1			
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0			
Hexabromocyclododecane (HBCDD)	3194-55-6 25637-99-4, 134237-50-6, 134237-51-7, 134237-52-8			
Decabromodiphenyl ether (DecaBDE)	1163-19-5	Not detected	Toluene extraction followed by GC-MS analysis	5 ppm
Octabromodiphenyl ether (OctaBDE)	32536-52-0			
Pentabromodiphenyl ether (PentaBDE)	32534-81-9			
Tris-(aziridinyl)-phosphine oxide (TEPA)	545-55-1	Not detected	Potassium Hydroxide digestion followed by GC-MS Headspace analysis of Ethyleneimine	5 ppm
Tetrabromobisphenol A (TBBPA)	79-94-7	Not detected	Acetonitrile extraction and analysis by LC-DAD-MS and confirmation with GC-MS	5 ppm
Polybrominated Diphenyl Ethers (PBDE)	Various	Not detected	Methanol extraction and analysis by GC-MS and LC-MS	5 ppm
Polybrominated Biphenyls (PBB)	Various			
Tri-o-cresyl phosphate	78-30-8			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8			
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0			
Decabromodiphenyl ethane (DBDPE)	84852-53-9			

[2] H&M Global Product Compliance Department must approve the usage of flame retardant on any kind of product. Contact your local production office.

All materials				
Requirement	**CAS no**	**Limit/ Requirement**	**Test method**	**Reporting limit**
Octabromodiphenyl ether (OctaBDE)	32536-52-0			
Decabromodiphenyl ether (DecaBDE)	1163-19-5			
Pentabromodiphenyl ether (PentaBDE)	32534-81-9			
Tris(1,3-dichloroisopropyl)phosphate (TDCP)	13674-87-8			
Tris(1-chloro-2-propyl)phosphate (TCPP)	115-86-6			
Triphenyl phosphate (TPhP)	115-86-6			
Lead (Pb)	7439-92-1	90 ppm[3]	Metal Products: CPSC-CH-E1001-08.3	1 ppm
			Non-metal Products: CPSC-CH-E1002-08.3	1 ppm
Nanomaterials "Nanomaterial" means a natural, incidental or manufactured material consisting of solid particles that are present, either on their own or as identifiable constituent particles in aggregates or agglomerates, and where 50 % or more of these particles in the number-based size distribution fulfil at least one of the following conditions:(a) one or more external dimensions of the particle are in the size range 1 nm to 100 nm;(b) the particle has an elongated shape, such as a rod, fibre or tube, where two external dimensions are smaller than 1 nm and the other dimension is larger than 100 nm;(c) the particle has a plate-like shape, where one external dimension is smaller than 1 nm and the other dimensions are larger than 100 nm.[4]	Various	Usage ban[5]	Input control	N/A
Perfluorinated Compounds (PFCs)				
Perfluorobutane Sulfonate (PFBS)	29420-49-3	Not detected	For FTOHs: Solvent extraction according to Draft CEN/TS 15968 and	For FTOHs: 10 µg/m2
Perfluorohexane Sulfonate (PFHxS)	3871-99-6			

[3] Other limits apply if otherwise stated in this document for respective material.
[4] European commission recommendation on the definition of nanomaterial ((2022/C 229/01), Official Journal of the European Union, 14.06.2022.
[5] The substance(s) must not be used in production and must not be added to the product

All materials				
Requirement	**CAS no**	**Limit/ Requirement**	**Test method**	**Reporting limit**
Perfluoroheptane Sulfonate (PFHpS)	375-92-8		analysis by Gas Chromatograph Mass Spectrometer (GC-MS-MS) For Others: Draft CEN/TS 15968 Solvent extraction and analysis by Liquid Chromatograph Tandem Mass Spectrometer (LC-MS-MS)	For Others: 1 µg/m2
Perfluorooctane Sulfonate (PFOS)	56773-42-3			
Perfluorodecane Sulfonate (PFDS)	126105-34-8			
Perfluorooctane Sulfonamide (PFOSA) 1H,1H,2H,2H H4PFOS; 6:2	754-91-6			
Perfluorobutane Acid (PFBA)	375-22-4			
Perfluoropentane Acid (PFPA)	2706-90-3			
Perfluorohexane Acid (PFHxA)	307-24-4			
Perfluoroheptane Acid (PFHpA)	375-85-9			
Perfluorooctanoic Acid (PFOA)	335-67-1			
Perfluorononane Acid (PFNA)	375-95-1			
Perfluorodecane Acid (PFDA)	335-76-2			
Perfluoroundecanoic Acid (PFUnA)	4234-23-5			
Perfluorododecanoic Acid (PFDoA)	307-55-1			
Perfluorotridecanoic Acid (PFTrA)	72629-94-8			
Perfluorotetradecanoic Acid (PFTeA)	376-06-7			
Perfluo-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6			
7H-Dodecanefluoroheptane Acid (HPFHpA)	-			
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-Perfluorodecylacrylate (8:2 FTA)	27905-45-9			
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-decanol (8:2 FTOH)	678-39-7			
1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1			
2-(N-methylperfluoro-FASE 1 octanesulfonamido)-ethanol (MeFOSE)	24448-09-7			

All materials				
Requirement	**CAS no**	**Limit/ Requirement**	**Test method**	**Reporting limit**
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2			
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8			
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2			
All other Perfluorinated or Polyfluorinated compounds (fully or partially fluorinated compounds)	Various			
Polyvinylchloride (PVC) and similar chlorinated polymers, e.g.				
Polyvinylchloride (PVC)	9002-86-2	Not detected	Beilstein's test and infrared spectroscopy (IR) with or without chemical separation	Qualitative
Polyvinylidenchloride	9002-85-1			
Polychloroprene	9010-98-4			
Organotin Compounds				
Dibutyltin (DBT)	1002-53-5	1 ppm	CEN ISO/TS 16179	0.05 ppm For High matrix samples (silicone & rubber): 0.5 ppm
Dioctyltin (DOT)	94410-05-6	1 ppm		
Tributyltin (TBT)	56573-85-4	Sum = Not detected		
Tricyclohexyltin (TCyHT)	6056-50-4			
Trioctyltin (TOT)	250252-89-2			
Triphenyltin (TPhT)	668-34-8			
Other not listed trisubstituted organotins	Various	Sum<1 ppm		
Polyaromatic Hydrocarbons (PAH)				
Benzo[a]anthracene	56-55-3	<1 ppm	AfPS GS 2014:01	0.2 ppm
Benzo[a]pyrene	50-32-8	<1 ppm		
Benzo[b]fluoranthene	205-99-2	<1 ppm		
Benzo[e]pyrene	192-97-2	<1 ppm		
Benzo(g,h,i)perylene	191-24-2	<1 ppm		
Benzo[j]fluoranthene	205-82-3	<1 ppm		
Benzo[k]fluoranthene	207-08-9	<1 ppm		
Chrysene	218-01-9	<1 ppm		
Dibenzo[a,h]anthracene	53-70-3	<1 ppm		
Indeno(1,2,3-c,d)pyrene	193-39-5	<1 ppm		
Acenaphthene	83-32-9	Sum < 10 ppm		
Acenaphthylene	208-96-8			
Anthracene	120-12-7			
Fluoranthene	206-44-0			
Fluorene	86-73-7			
Phenanthrene	85-01-8			
Pyrene	129-00-0			

All materials				
Requirement	**CAS no**	**Limit/ Requirement**	**Test method**	**Reporting limit**
Naphthalene	91-20-3	<2 ppm		
Sum of 18 PAH		<10 ppm		
Polymers				
Polycarbonate (PC)	80-05-7	Usage ban will come into force OPD Feb 1st 2030. Applies to both virgin and recycled material.	Input control	N/A
Polystyrene (PS) Expanded Polystyrene (EPS) High Impact Polystyrene (HIPS)	9003-53-6, 9003-55-8, etc.	Usage ban will come into force OPD Feb 1st 2030. Applies to both virgin and recycled material.	Input control	N/A
Styrene-based Thermoplastic Rubber (TPR) Styrene-based Thermoplastic Elastomer (TPE)	Various	Usage ban will come into force OPD Feb 1st 2030. Applies to both virgin and recycled material.	Input control	N/A
Acrylonitrile Styrene/Styrene Acrylonitrile (AS/SAN)	Various	Usage ban will come into force OPD Feb 1st 2030. Applies to both virgin and recycled material.	Input control	N/A
SVHC Check the ECHA website for the updated Candidate List of Substances of Very High Concern for Authorisation [6]		1000 ppm in each homogenous part of the product, except if lower limit applies as per other parts of this document.	Combined Screening using ICP-MS, GC-MS and LC-TOF	
Substances defined as hazardous due to intrinsic properties Criteria for hazardous as defined in REACH Article 57[7]		1000 ppm, except if lower limit applies as per other parts of this document.		

[6] http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

[7] REACH Regulation (EC) No 1907/2006 http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02006R1907-20150601&from=EN

Surface coating, Surface treatment & Adhesives

Surface coating, Surface treatment & Adhesives				
Requirement	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Chromium VI	7440-47-3	Not detected	EN ISO 17075	3 ppm
Chloroparaffins				
Short chained chloroparaffins (SCCPs) C10-C13	85535-84-8	Not detected	ISO 18219 N-hexane extraction, ultrasound (60°C, 60 min) and analysis by GC-MS using NCI (Negative Chemical Ionization)	30 ppm
Formaldehyde Shall not be added to the surface coating of the product or be formed during curing	50-00-0	Usage ban	ISO 14184-1	16 ppm
Isocyanates				
Diphenylmethane diisocyanate (MDI)	101-68-8	Not detected, sum of listed isocyanates	ISO 10283	3 ppm
Hexamethylene diisocyanate (HMDI)	822-06-0			
Isophorone diisocyanate (IPDI)	4098-71-9			
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9			
2,4-Toluene diisocyanate (2,4 TDI)	584-84-9			
2,6-Toluene diisocyanate (2,6 TDI)	91-08-7			
Metals, Total Amount				
Cadmium (Cd)	7440-43-9	100 ppm	EN 16711-1/EN 14602	1 ppm
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
Lead (Pb)	7439-92-1	90 ppm	CPSC-CH-E1003-09.1	1 ppm
Phthalates				
Butyl benzyl phthalate (BBP)	85-68-7	500 ppm	CPSC-CH-C1001-09.3	50 ppm
Dibutyl phthalate (DBP)	84-74-2	500 ppm		
Diethyl phthalate (DEP)	84-66-2	500 ppm		
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	500 ppm		
Diisobutyl phthalate (DIBP)	84-69-5	500 ppm		
Diisodecyl phthalate (DIDP)	26761-40-0	500 ppm		

Surface coating, Surface treatment & Adhesives				
Requirement	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Diisononyl phthalate (DINP)	28553-12-0	500 ppm		
Di-n-hexyl phthalate (DnHP)	84-75-3	500 ppm		
Di-n-octyl phthalate (DnOP)	117-84-0	500 ppm		
All other phthalates (all other esters of o-phthalic acid)	Various	500 ppm		
Sum of phthalates		≤ 1000 ppm		
Triglycidyl isocyanurate (TGIC)	2451-62-9	Powder coating shall not contain hardener.	Self-declaration	

Metal

Metal				
Requirement	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Total metal				
Cadmium (Cd)	7440-43-9	100 ppm	EN 16711-1	10 ppm
Lead (Pb):	7439-92-1			10 ppm
Products for adults		300 ppm		
Products for children[8]		90 ppm		
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
Nickel (Ni), Extractable Amount				
In metal products or parts of products in direct and prolonged skin contact	7440-02-0	Maximum release: 0.5 µg/cm^2/week	Nickel release by EN 1811+A1 Abrasion of coated items by EN 12472	0.05 µg/cm^2/week

[8] Products for children up to 12 years of age

Plastic & Rubber including Foam

Plastic & Rubber including Foam				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Bisphenol A in Polycarbonate (PC), Extractable Amount	80-05-7	3 ppm	Extractable Amount: Extraction with artificial sweat solution (ISO 105 E04) and BPA Determination by LC-MS	0.1 ppm
Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs)	Various	Usage ban	Self declaration	-
Chlorophenols				
Pentachlorophenol (PCP) and its salts and esters	Various, e.g. 87-86-5	Sum < 0.5 ppm	BVL B 82.02-08(modified)/ EN ISO 17070 (modified) KOH extraction direct LC-MS analysis or derivatisation followed by GC-MS analysis	0.05 ppm
Tetrachlorophenol (TeCP) and its salts and esters	Various, e.g. 58-90-2	Sum < 0.5 ppm		0.05 ppm
Chloroparaffins				
Short chained chloroparaffins (SCCPs) C10-C13	85535-84-8	1000 ppm (in each homogenous part)	N-hexane extraction, ultrasound (60°C, 60 min) and analysis by GC-MS using NCI (Negative Chemical Ionization) ISO/DIS 18219	30 ppm
Dimethylformamide (DMFa)	68-12-2	For products and in production process: General usage ban	Ultrasound extraction using ethylacetate followed by GC-MS analysis	5 ppm
Isocyanates				
Diphenylmethane diisocyanate (MDI)	101-68-8	Not detected	ISO 10283	3 ppm
Hexamethylene diisocyanate (HMDI)	822-06-0			
Isophorone diisocyanate (IPDI)	4098-71-9			
Tetramethylxylene diisocyanate (TMXDI)	2778-42-9			
2,4-Toluene diisocyanate (2,4 TDI)	584-84-9			
2,6-Toluene diisocyanate (2,6 TDI)	91-08-7			
Metals, Total Amount				
Cadmium (Cd)	7440-43-9	100 ppm	EN 14602 and EN 16711-1	1 ppm
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
Phthalates				

Plastic & Rubber including Foam				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Butyl benzyl phthalate (BBP)	85-68-7	500 ppm	CPSC-CH-C1001-09.3	50 ppm
Dibutyl phthalate (DBP)	84-74-2	500 ppm		
Diethyl phthalate (DEP)	84-66-2	500 ppm		
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	500 ppm		
Diisobutyl phthalate (DIBP)	84-69-5	500 ppm		
Diisodecyl phthalate (DIDP)	26761-40-0	500 ppm		
Diisononyl phthalate (DINP)	28553-12-0	500 ppm		
Di-n-hexyl phthalate (DnHP)	84-75-3	500 ppm		
Di-n-octyl phthalate (DnOP)	117-84-0	500 ppm		
All other phthalates (all other esters of o-phthalic acid)	Various	500 ppm		
Sum of phthalates		≤ 1000 ppm		
Polychlorinated Biphenyls (PCB)	1336-36-3	The sum < 0.5 ppm	Solvent extraction and analysis by GC-MS	0.1 ppm
Polychlorinated Triphenyls (PCT)	61788-33-8			0.1 ppm

Paper & Board

Paper & Board				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Alkylphenol Ethoxylates / Alkylphenols (APEO/AP)				
Nonylphenol Ethoxylates (NPE)	Various	100 ppm	Modified ISO 18254: Methanol extraction followed by LC-MS analysis	20 ppm
Octylphenol Ethoxylates (OPE)	Various	100 ppm		
Nonylphenol (NP)	Various	Not detected	ISO 18254, determination by GC/MS	5 ppm
Octylphenol (OP)	Various	Not detected		
Azo dyes and pigments – releasing following amines				
4-aminodiphenyl	92-67-1	20 ppm per listed amine	ISO 14362-1 (EN ISO 14362-3 determination of 4-aminoazobenzene)	10 ppm
Benzidine	92-87-5			
4-Chloro-o-toludine	95-69-2			
2-Naphthylamine	91-59-8			
o-Aminoazotoluene	97-56-3			
2-Amino-4-nitrotoluene	99-55-8			

Paper & Board				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
2,4-Diaminoanisole	615-05-4			
4,4′-Diaminodiphenylmethane	101-77-9			
3,3′-Dichlorobenzidine	91-94-1			
3,3′-Dimethoxybenzidine (o-Dianisidine)	119-90-4			
3,3′-Dimethylbenzidine (o-Tolidine)	119-93-7			
3,3′-Dimethyl-4,4′-diaminodiphenylmethane	838-88-0			
p-Chloroaniline	106-47-8			
p-Cresidine	120-71-8			
4,4′-Methylene-bis-(2-chloroaniline)	101-14-4			
4,4′-Oxydianiline	101-80-4			
4,4′-Thiodianiline	139-65-1			
2,4-Toluenediamine	95-80-7			
o-Toluidine	95-53-4			
2,4,5-Trimethylaniline	137-17-7			
o-Anisidine	90-04-0			
p-Aminoazobenzene	60-09-3			
2,4-Xylidine	95-68-1			
2,6-Xylidine	87-62-7			
Elemental chlorine bleach		Usage ban	Self declaration	
Formaldehyde	50-00-0	75 ppm	EN 645 and EN 1541	5 ppm
Pentachlorophenol and its salts and esters (PCP)	Various, e.g. 87-86-5	Sum < 0.5 ppm	EN ISO 17070	0.5 ppm

Bamboo, Wood, Wood Based Materials and Straw

Bamboo, Wood, Wood-based materials & Straw				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Formaldehyde				
In all wood based products	50-00-0	75 ppm	EN 717-3	20 ppm
Composite wood		Composite wood products[9] must comply with TSCA Title VI	ASTM E1333 ASTM D6007	-

[9] Hardwood, plywood, particleboard, medium density fiberboard, thin medium density fiberboard (thickness ≤ 8mm), and also furniture and other finished products made with composite wood products

Bamboo, Wood, Wood-based materials & Straw				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Lindane	58-89-9	Not detected	U.S. EPA Method 8081a, 8151a, 8141a and 8270c or Analysis of organochloro pesticides by GC-MS or LC-MS	0.05
Pentachlorophenol and its salt and esters (PCP)	Various, e.g. 87-86-5	0.5 ppm	CEN/TR 14823	0.5 ppm
Wood preservatives	-	Cannot be used without approval by H&M group[10]	Self declaration	-

Terracotta, Enamel, Concrete, Soapstone[11], Marble[12], Ceramic, Porcelain, Glass & Crystal

Terracotta, Enamel, Concrete, Soapstone, Marble, Ceramic, Porcelain, Glass & Crystal				
Restricted substance	**CAS no**	**Limit/Requirement**	**Test method**	**Reporting limit**
Cadmium (Cd)	7440-43-9	40 ppm	Total digestion and analyze with ICPAES/ICPMS.	1 ppm
Mercury (Hg)	7439-97-6	2.5 ppm	Total digestion, analysis by ICP-MS. Using HF in silica-based pigments are encountered.	1 ppm
Arsenic (As)	7440-38-2	100 ppm	EN 16711-1, analysis by ICP-MS	

[10] Please contact your local production office.
[11] It is important to ascertain the region of mining for soapstone as it can contain asbestos depending on where it is originated.
[12] It is important to ascertain the region of mining for marble as it can contain heavy metals depending on where it is originated.