

The background of the entire page is a close-up photograph of several horizontal wooden planks. The wood has a natural, weathered appearance with various shades of brown, from light tan to dark, almost black, charred or stained areas. The grain of the wood is clearly visible, and there are some small knots and imperfections. The planks are separated by dark, recessed grooves.

H&M GROUP CHEMICAL RESTRICTIONS 2020

RESTRICTED SUBSTANCES LIST (RSL)

Furniture

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

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General

H&M has established H&M Group Chemical Restrictions for all products due to concern for the health of customers as well as for the environment and working conditions. H&M Group Chemical Restrictions consist of several parts with regard to product types. This document concerns Furniture and requirements are divided into materials. Each limit in H&M Group Chemical Restrictions is valid for homogeneous parts of the concerned product. Test methods are specified but in case of undated test method, the latest version is valid.

When the product has textile and leather parts, it must also comply with *H&M Group Chemical Restrictions – Textile products | Accessories | Footwear, Bags and Belts*¹. If the product is sold in a packaging, it must also comply with *H&M Group Chemical Restrictions non-commercial goods (NCG), construction and packaging*¹.

The official and valid version of this document is in English. Any translation of the document is prepared for reference only. H&M accepts no liability for any mistakes done in the translation.

Commitment

By accepting H&M Standard Purchase Conditions, the Supplier commits to comply with H&M Group Chemical Restrictions. It is the Supplier's responsibility to assure compliance with H&M Group Chemical Restrictions and to inform all their upstream suppliers and subcontractors about the content of H&M Group Chemical Restrictions. By accepting H&M Standard Purchase Conditions, each Supplier acknowledges that H&M reserves the right to:

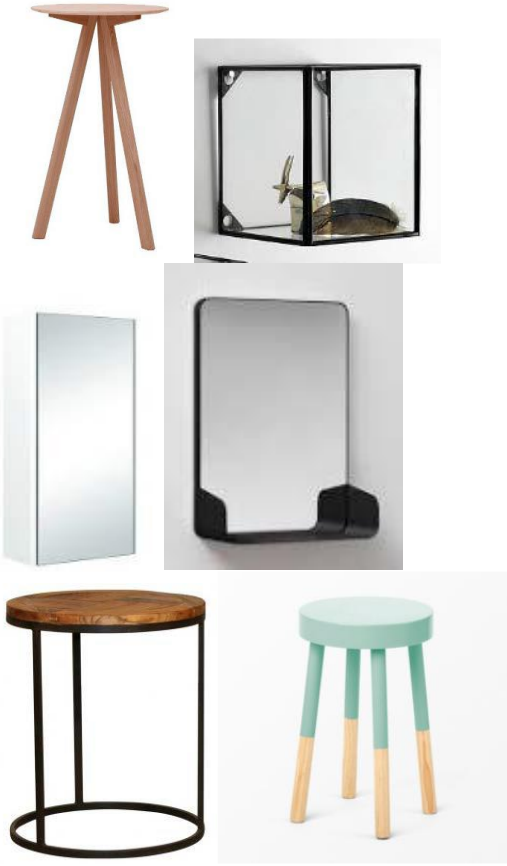
- *Inspect and test any product, any part of production and/or packaging, by any listed or appropriate method, at any time or at any stage of production.*
- *Cancel the Order, or, if the products are already delivered, return the products to the Supplier if the product, production and/or packaging do 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 the Safety Data Sheets (SDS) for all substances and preparations (dyes, colorants, solvents, chemicals etc.) used in the production of a specific Order.*

In the case of contradictory test results, H&M test results will prevail.

¹ Publicly available

Examples

All details on your product must comply with H&M Chemical Restrictions. The examples do not claim to be complete.

	<ul style="list-style-type: none">➤ Tables➤ Shelves➤ Cabinets➤ Stools➤ Large Mirrors
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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. ²
Homogeneous	Uniform composition throughout, i.e. a material that cannot be mechanically disjointed into different materials.
Furniture	All furniture products such as small tables, shelves, cabinets, stools and large mirrors.
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

² 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
Flame retardants³				
Tris(2,3-dibromopropyl)phosphate (TBPP)	126-72-7	Not detected	Methanol extraction and analysis with GC-MS and LC-MS	10 ppm
Bis(2,3-dibromopropyl)phosphate	5412-25-9			
Tris-(aziridiny)-phosphineoxide (TEPA)	545-55-1	Not detected	Potassium Hydroxide digestion followed by GC-MS Headspace analysis of Ethyleneimine	10 ppm
Tetrabromobisphenol A (TBBP A)	79-94-7	Not detected	Acetonitrile extraction and analysis by LC-DAD-MS and confirmation with GC-MS	10 ppm
Polybrominated Diphenyl Ethers (PBDE)	Various	Not detected	Methanol extraction and analysis by GC-MS and LC-MS	10 ppm
Polybrominated Biphenyls (PBB)	Various			
Tri-o-cresyl phosphate	78-30-8			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8			
Hexabromocyclododecane (HBCDD)	3194-55-6, 25637-99-4, 134237-50-6, 134237-51-7, 134237-52-8			
2,2-Bis(bromomethyl)-1,3-propanediol	3296-90-0			
Tris(1,3-dichloroisopropyl)phosphate (TDCP)	13674-87-8			
Triphenyl phosphate (TPhP)	115-86-6			
Lead (Pb), Total Amount	7439-92-1			

³ H&M Global Product Compliance Department must approve the usage of flame retardant on any kind of product. Any other flame retardant must be approved by H&M Global Product Compliance Department before using.

All Materials				
Requirement	CAS no	Limit/ Requirement	Test method	Reporting limit
Mold		Spores and mycelia of mold not detected	1. Smell test SNV 195 651 2. Light microscope analysis for suspicious spots 3. Staining with lactophenol blue followed by microscope analysis	1. Suspicious smell 2. Little spots 3. Spores and mycelia of mold detected/not detected
Odor		Grade 2 – not unpleasant	Smell test SNV 195 651	1. No odor 2. Slight odor, not unpleasant 3. Endurable odor, slightly unpleasant 4. Pestering odor, unpleasant 5. Insufferable odor, very unpleasant
Perfluorinated Compounds (PFCs)⁴				
Perfluorobutane Sulfonate (PFBS)	29420-49-3	Not detected	For FTOHs – Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS).	10 µg/m ²
Perfluorohexane Sulfonate (PFHxS)	3871-99-6			
Perfluoroheptane Sulfonate (PFHpS)	375-92-8			
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			1 µg/m ²

⁴ Impurities of Perfluorinated Compounds (PFCs) in functional finishes are accepted if technically unavoidable in the manufacturing process.

All Materials				
Requirement	CAS no	Limit/ Requirement	Test method	Reporting limit
Perfluorodecane Acid (PFDA)	335-76-2		For Others – CEN/TS 15968 Solvent extraction and analysis by Liquid Chromatograph Tandem Mass Spectrometer (LC-MS-MS)	
Perfluoroundecanoic Acid (PFUnA)	4234-23-5, 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)	-			
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			
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			
Ammoniumpentadecafluor ootanoate (APFO)	3825-26-1	1000 ppm	Solvent extraction and analysis by LC-MS-MS	100 ppm
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			

All Materials				
Requirement	CAS no	Limit/ Requirement	Test method	Reporting limit
Phthalates				
Butyl benzyl phthalate (BBP)	85-68-7	500 ppm	CPSC-CH-C1001-09.3 Analysis by GC-MS	50 ppm
Dibutyl phthalate (DBP)	84-74-2	500 ppm		
Diethyl phthalate (DEP)	84-66-2	500 ppm		
Di-(2-ethylhexyl) phthalate (DEHP)	1cv-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) including phthalates included in the Candidate List of REACH regulation (EC) No 1907/2006 as SVHC	Various	500 ppm		
Sum of phthalates		≤ 1000 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
Organotin Compounds				
Dibutyltin (DBT)	1002-53-5	1 ppm	ISO/TS 16179	0.05 ppm For High matrix samples: 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		

All Materials				
Requirement	CAS no	Limit/ Requirement	Test method	Reporting limit
SVHC Check the ECHA website for the updated Candidate List of Substances of Very High Concern for Authorisation ⁵		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 ⁶		1000 ppm, except if lower limit applies as per other parts of this document.		

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
Formaldehyde Shall not be added to the surface coating of the product or be formed during curing (for textiles only)	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 (modified)	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		1 ppm

⁵ http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

⁶ 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				
Requirement	CAS no	Limit/Requirement	Test method	Reporting limit
Mercury (Hg)	7439-97-6	0.5 ppm	DIN EN 16711-1/DIN EN 14602	0.1 ppm
Polyaromatic Hydrocarbons (PAH)				
Benz[a]anthracene	56-55-3	0.5 ppm	AfPS GS 2014:01 Extraction with toluene followed by GC-MS analysis	0.1 mg/kg
Chrysene	218-01-9	0.5 ppm		
Benzo[b]fluoranthene	205-99-2	0.5 ppm		
Benzo[j]fluoranthene	205-82-3	0.5 ppm		
Benzo[k]fluoranthene	207-08-9	0.5 ppm		
Benzo[a]pyrene	50-32-8	0.5 ppm		
Benzo[e]pyrene	192-97-2	0.5 ppm		
Dibenzo[a,h]anthracene	53-70-3	0.5 ppm		
Benzo(g,h,i)perylene	191-24-2	0.5 ppm		
Indeno(1,2,3-c,d)pyrene	193-39-5	0.5 ppm		
Acenaphthene	83-32-9	The 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			
Naphthalene	91-20-3			
Sum of 18 PAH			<10 ppm	
Triglycidyl isocyanurate (TGIC)	2451-62-9		Powder coating shall not contain hardener.	Self-declaration
Dimethylfumarate	624-49-7	0.1 ppm For leather only	ISO 16186	0.1 ppm
VOCs in surface treatment	Various	Applied amounts of actual VOC components should not exceed: 35 g/m ² for domestic furniture	GC-MS screening for VOC content	

Metal

Metal				
Requirement	CAS no	Limit/Requirement	Test method	Reporting limit
Total metal				
Cadmium (Cd)	7440-43-9	100 ppm		10 ppm

Metal				
Requirement	CAS no	Limit/Requirement	Test method	Reporting limit
Mercury (Hg)	7439-97-6	0.5 ppm	DIN EN 16711-1/DIN EN 14602	0.1 ppm
Lead	7439-92-1	200 ppm		10 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 (uncoated surfaces) Nickel release by EN 12472 (coated surfaces)	0.05 µg/cm ² /week

Plastic & Rubber including Foam and Silicone

Plastic & Rubber including Foam and Silicone				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Bisphenol A - 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)	several	Usage ban	Self-declaration	-
Chlorophenols				
Pentachlorophenol (PCP) and its salts and esters	Various, e.g. 87-86-5	0.5 ppm	BVL B 82.02-08 (modified) Potassium Hydroxide extraction direct LC-MS analysis or derivatisation followed by GC-MS analysis	0.05 ppm
Tetrachlorophenol (TeCP) and its salts and esters	58-90-2	0.5 ppm		0.05 ppm
Dimethylformamide (DMF)	68-12-2	1000 ppm	ISO/TS16189 Ultrasound extraction using ethylacetate followed by GC-MS analysis	10 ppm
Isocyanates				
Diphenylmethane diisocyanate (MDI)	101-68-8	Sum= Not detected		3 ppm

Plastic & Rubber including Foam and Silicone				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Hexamethylene diisocyanate (HMDI)	822-06-0		ISO 10283 (modified)	
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	DIN EN 14602 and DIN EN 16711-1	1 ppm
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
Polyaromatic Hydrocarbons (PAH)				
Benzo[a]anthracene	56-55-3	0.5 ppm	AFPS GS 2014:01 Extraction with toluene followed by GC-MS analysis	0.1 mg/kg
Benzo[a]pyrene	50-32-8	0.5 ppm		
Benzo[b]fluoranthene	205-99-2	0.5 ppm		
Benzo[e]pyrene	192-97-2	0.5 ppm		
Benzo(g,h,i)perylene	191-24-2	0.5 ppm		
Benzo[j]fluoranthene	205-82-3	0.5 ppm		
Benzo[k]fluoranthene	207-08-9	0.5 ppm		
Chrysene	218-01-9	0.5 ppm		
Dibenzo[a,h]anthracene	53-70-3	0.5 ppm		
Indeno(1,2,3-c,d)pyrene	193-39-5	0.5 ppm		
Acenaphthene	83-32-9	The 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			
Naphthalene	91-20-3			
Sum of 18 PAH		<10 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

Wood, Composite Wood⁷, Cork, Rattan, Bamboo

Wood & Composite Wood				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Formaldehyde				
In all wood based products	50-00-0	150 ppm ≤0.124 mg/m ³ air	EN 717-3 EN 717-1 ⁸	20 ppm 0.03 mg/m ³
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	0.5 mg/kg
Pentachlorophenol and its salt and esters (PCP)	Various, e.g. 87-86-5	0.5 ppm	CEN/TR 14823	0.5 ppm
Arsenic (As) compounds	Various, e.g. 7440-38-2	Not detected	US EPA 3052	10 ppm
Wood preservatives	-	Cannot be used without approval by H&M group ⁹	Self declaration	-

Terracotta, Enamel, Concrete, Soapstone¹⁰, Marble¹⁰, Ceramic, Porcelain, Glass & Crystal

Terracotta, Enamel, Concrete, Soapstone, Marble, Ceramic, Porcelain Glass & Crystal				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Bisphenol A - Extractable Amount	80-05-7	3 ppm	Extraction with artificial sweat solution (ISO 105 E04), analysis by LC-MS	0.1 ppm
Cadmium (Cd)	7440-43-9	40 ppm	Total digestion, analysis with ICP-MS.	1 ppm

⁷ Includes furniture made from hardwood, plywood, particleboard, medium density fiberboard, thin medium density fiberboard (thickness ≤ 8mm)

⁸ The emissions of free formaldehyde from wood-based panels shall not exceed the E1 emissions limit as described in BS EN 13986.

⁹ Please contact your local production office.

¹⁰ It is important to ascertain the mining region as it can contain asbestos depending mining location.

Terracotta, Enamel, Concrete, Soapstone, Marble, Ceramic, Porcelain Glass & Crystal				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Bisphenol A - Extractable Amount	80-05-7	3 ppm	Extraction with artificial sweat solution (ISO 105 E04), analysis by LC-MS	0.1 ppm
Mercury (Hg)	7439-97-6	2,5 ppm	Total digestion, analysis with ICP-MS. Using HF if silica based pigment is encountered.	1 ppm
Arsenic (As)	7440-38-2	100 ppm	EN 16711-1, analysis by ICP-MS	

Version	Date	Valid from	Changes made	Page or Chapter
1	January 2019	January 2019	Adapted to new document template	-
2	February 2020	February 2020	Introductory text, Limit on lead on plastics & rubber, and Terracotta, enamel ... products.	3, 12, 14