




# H&M GROUP CHEMICAL RESTRICTIONS 2025

RESTRICTED SUBSTANCES LIST (RSL)

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NON-COMMERCIAL GOODS (NCG), AND PACKAGING

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 Noncommercial goods (NCG), and packaging. For Store Interior, please go to RSL for Furniture.

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.
Homogeneous	Uniform composition throughout, i.e. a material that cannot be mechanically disjointed into different materials.
Kinematic Limit	Describes how fast a fluid is spread on a flat surface in relation to its mass, i.e. weight.
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.
Self-declaration	All chemicals used should have Safety Data Sheets, SDS, showing that no restricted substance is included. Upon request supplier must be able to present the SDS for the chemicals used in the production of the requested product. Other supporting documents such as certificates from subcontractors etc. can also be considered as a part of the SDS.
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.
Usage ban	The substance or material must not be used in production and it must not be added to the product. 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

AFIRM	Apparel and Footwear International RSL Management
AfPS	The German Product safety Commission
CAS no	Chemical Abstracts Service number, an identification number for chemicals in this database.
CI no	Color Index number
CSPIA	The Consumer Product Safety Improvement Act
cSt	centistokes, which is the same as $1\text{mm}^2/\text{s}$ . This is the unit used for kinematic viscosity.
ECHA	European Chemicals agency
FCM	Food contact material. The RSL for food contact products can be found under the webpage for chemical restrictions.
ISO	International Organization for Standardization
MRSL	Manufacturing Restricted Substances List
MOAH	Mineral oil aromatic hydrocarbon
MOSH	Mineral oil saturated hydrocarbon
PFAS	Per- and polyfluoroalkyl substances are a group of persistent organic substances that all consist of a carbon chain in which hydrogen atoms are entirely or partly replaced by fluorine atoms. eg. Gore-Tex, SCOTCHGARD
PFC	An organofluorine compound containing only carbon-fluorine and carbon-carbon bonds. eg. PTFE (Teflon)
ppm	Parts per million, which is the same as $\text{mg}/\text{kg}$ ( $1\text{ ppm} = 1\text{ mg}/\text{kg}$ ).
Percentage (%)	Percentage is weight by weight, % w/w
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
RSL	Restricted substance list. Please find the H&M Group RSLs under the web page for chemical restrictions.
SVHC	Substances of Very High Concern
VOC	Volatile organic compounds. Organic compounds with low boiling points that therefore emit from solid material at room temperature.

<b>ALL MATERIALS AND GENERAL REQUIREMENTS</b>				
These requirements are applicable for all kinds of final products				
<b>Restricted substance/material/property</b>	<b>CAS</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Acrylamide</b>				
Acrylamide	79-06-1	1000 ppm	Self-declaration	-
<b>Antibacterial Treatment</b>				
Silver (Ag) and its salts and compounds	7440-22-4, Various	Usage ban	Self-declaration	-
Triclocarban	101-20-2		Self-declaration	-
Triclosan	3380-34-5		Solvent extraction, derivatization followed by GC-MS analysis	10 ppm
Other antibacterial treatments			Self-declaration	
<b>Alkylphenol Ethoxylates / Alkylphenols (APEO / AP)</b>				
Nonylphenol Ethoxylates (NPE)	Various e.g. 9016-45-9 26027-38-3 37205-87-1 68412-54-4 127087-87-0	100 ppm	<b>Textiles:</b> ISO 18254-1  <b>Plastic, rubber, silicone, foam:</b> ISO 18254-1 Modified: THF/ACN extraction followed by LC-MS EN  <b>Paper, cardboard:</b> EN ISO 18254-1 Modified: Methanol extraction followed by LC-MS	30 ppm
Octylphenol Ethoxylates (OPE)	Various e.g. 9002-93-1 9036-19-5 68987-90-6	100 ppm		
Nonylphenol (NP)	Various e.g. 104-40-5 11066-49-2 25154-52-3 84852-15-3	5 ppm	<b>Textile:</b> Methanol extraction followed by GC-MS  <b>Plastic, rubber, silicone, foam:</b> THF/ACN extraction followed by GC-MS  <b>Paper, cardboard:</b> EN ISO 18254 followed by GC/MS	5 ppm
Octylphenol (OP)	Various e.g. 140-66-9 1806-26-4	5 ppm		

<b>ALL MATERIALS AND GENERAL REQUIREMENTS</b>				
These requirements are applicable for all kinds of final products				
Restricted substance/material/property	CAS	Limit/Requirement	Test method	Reporting limit
	27193-28-8			
<b>Bisphenol A</b>				
	80-05-7	Total 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	1 ppm
<b>Chlorinated paraffins</b>				
Short-chained (SCCP) C10-C13	85535-84-8	100 ppm	ISO 22818:2021	30 ppm
Medium-chained (MCCP) C14-C17	85535-85-9	1000 ppm		
<b>Dimethylfumarate (DMFu)</b>				
DMFu	624-49-7	0.03 ppm	ISO/TS 16186	0.03 ppm
<b>Flame Retardants</b>				
See Appendix A – Table 2	See Appendix A – Table 2	5 ppm <sup>1</sup>	<b>Brominated flame retardants:</b> EN ISO 17881-1:2016  <b>Phosphorus flame retardants:</b> EN ISO 17881-2:2016	5 ppm
<b>Formaldehyde</b>				

<sup>1</sup> During a transition period until we have a more sustainable material in hangers, recycled polystyrene for use in hangers is exempt provided the flame retardants are unintentionally added. Instead, the limit for the sum of PBDE's, TPhP and TBBPA is 1000 mg/kg. The provisional limit is valid until 31 Dec 2023.

<b>ALL MATERIALS AND GENERAL REQUIREMENTS</b>				
These requirements are applicable for all kinds of final products				
<b>Restricted substance/material/property</b>	<b>CAS</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
Plastic or polymeric compounds	50-00-0	150 ppm	ISO 14184-1	16 ppm
Surface coating, Surface treatment, Adhesives and hardeners		Usage ban Shall not be added to the surface coating/treatment, adhesive and hardener or be formed during curing	ISO 14184-1	16 ppm
Paper & cardboard		150 ppm	EN 645 and EN 1541	5 ppm
In all wood-based products		150 ppm	EN 717-3	20 ppm
		≤0.124 mg/m <sup>3</sup> air	EN 717-1 EN 717-2 EN 120	0.03 mg/m <sup>3</sup> Shall not exceed the E1 limit described in EN 13986 or similiar
<b>Heavy Metals</b>				
<b>Surface Coating, Surface Treatment, Adhesives &amp; Hardeners</b>				
Chromium VI (Cr6+)	18540-29-9	Usage ban	EN ISO 17075	3 ppm
Cadmium (Cd)	7440-43-9	Usage ban Contamination limit value: 75 ppm	EN 14602 and EN 16711-1	1 ppm
Lead (Pb)	7439-92-1	Usage ban Contamination limit value: 90 ppm	CPSC-CH-E1003-09.1	1 ppm
Mercury (Hg)	7439-97-6	Usage ban Contamination limit value: 0.5 ppm	EN 16711-1	0.1 ppm
<b>Plastic, Rubber, Silicone &amp; Foam</b>				
Chromium VI (Cr6+)	18540-29-9	≤ 100 ppm	Total metal content by microwave digestion with HNO <sub>3</sub> /H <sub>2</sub> O <sub>2</sub> and UV-VIV analysis	1 ppm
Cadmium (Cd)	7440-43-9	75 ppm	EN 14602	1 ppm
Lead (Pb)	7439-92-1	90 ppm		1 ppm



<b>ALL MATERIALS AND GENERAL REQUIREMENTS</b>				
These requirements are applicable for all kinds of final products				
<b>Restricted substance/material/property</b>	<b>CAS</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
Mercury (Hg)	7439-97-6	0.5 ppm	and lead EN 16711-1	0.1 ppm
<b>Metal products</b>				
Cadmium (Cd)	7440-43-9	40 ppm	Total metal content by microwave digestion with HNO <sub>3</sub> /H <sub>2</sub> O <sub>2</sub> and UV-VIV analysis	1 ppm
Lead (Pb)	7439-92-1	300 ppm	Lead (Pb):	Lead (Pb):
Mercury (Hg)	7439-97-6	0.5 ppm	EN 16711-1	0.1 ppm
Chromium VI (Cr <sup>6+</sup> )	18540-29-9	Usage ban	IEC 62321-7-1	
Nickel (Ni), Extractable amount	7440-02-0	Maximum release: 0.5 µg/cm <sup>2</sup> /week In metal products or part of products in direct and prolonged skin contact	EN 12472:2020 and EN 1811:2023	0.05 µg/cm <sup>2</sup> /week
<b>Paper &amp; Cardboard</b>				
Cadmium (Cd)	7440-43-9	Sum ≤ 100 ppm	Total metal content by microwave digestion with HNO <sub>3</sub> /H <sub>2</sub> O <sub>2</sub> and UV-VIV analysis.	1 ppm
Lead (Pb)	7439-92-1			20 ppm
Mercury (Hg)	7439-97-6		0.1 ppm	
Chromium VI (Cr <sup>6+</sup> )	18540-29-9		1 mg/kg	
<b>Bamboo, Wood, Composite Wood<sup>2</sup>, Cork, Rattan &amp; Straw</b>				
Arsenic (As)	7440-38-2	10 ppm	US EPA 3052	10 ppm
Chromated copper arsenate (CCA) As wood preservative		Usage ban		Self-declaration
<b>Odor &amp; emitted substances</b>				

<sup>2</sup> Includes furniture made from hardwood, plywood, particleboard, medium density fiberboard, thin medium density fiberboard (thickness ≤ 8mm)

<b>ALL MATERIALS AND GENERAL REQUIREMENTS</b>				
These requirements are applicable for all kinds of final products				
<b>Restricted substance/material/property</b>	<b>CAS</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
Odor	-	Grade 2 – not unpleasant	Smell test according to 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
4-Phenylcyclohexene	4994-16-5	≤ 0.050 mg/m <sup>2</sup> /h	GB 18587-2001	Specified in test method
Formaldehyde	50-00-0	≤ 0.050 mg/m <sup>2</sup> /h	Grade B (products qualified in respect of limitations of emitted harmful substances)	
Styrene	100-42-5	≤ 0.500 mg/m <sup>2</sup> /h		
Volatile Organic Compounds, Total (TVOC)	Various	≤ 0.600 mg/m <sup>2</sup> /h		
VOCs surface coating, surface treatment, adhesives and hardeners	Various	Applied amounts of actual VOC components should not exceed: 35 g/m <sup>2</sup> for domestic furniture	GC-MS screening for VOC content	
<b>Nanomaterials</b>				
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. (2011/696/EU)	Various	General usage ban	Input control	
<b>Organotin compounds</b>				
Dibutyltin (DBT)	1002-53-5	1 ppm	CEN ISO/TS 16179	0.05 ppm
Diocetyl tin (DOT)	94410-05-6	1 ppm		
Dimethyltin (DMT)	Various	1 ppm		
Tributyltin (TBT)	56573-85-4	0.05 ppm		

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Tricyclohexyltin (TCyHT)	6056-50-4			
Trioctyltin (TOT)	250252-89-2			
Triphenyltin (TPHT)	668-34-8			
Tripropyltin (TPT)	Various			
Sum of other not listed trisubstituted organotins		1 ppm		
<b>Perfluorinated Compounds (PFC/PFAS)</b>				
All per- and polyfluorinated compounds	Various	Usage ban	Input control	
See Appendix A – Table 1		For FTOHs: 10 µg/m <sup>2</sup> For Others: 1 µg/m <sup>2</sup>	EN ISO 23702-1 or EN 17681-1 & -2	For FTOHs: 10 µg/m <sup>2</sup> For Others: 1 µg/m <sup>2</sup>
<b>Phthalates – including all other esters of ortho-phthalic acid</b>				
See Appendix A – Table 3		500 ppm , per phthalate. The sum of phthalates ≤ 1000 ppm	<b>Sample preparation:</b> CPSC-CH-C1001-09.4  <b>Measurement:</b> <b>Textile:</b> GC-MS, ISO 14389 <b>Other materials:</b> GC/MS	Matrix dependent
<b>SVHC</b>				
<b>REACH SVHC</b>	-	1000 ppm in each homogeneous part of the product, except if lower limit applies as per other part of this document.		

## ALL MATERIALS AND GENERAL REQUIREMENTS

These requirements are applicable for all kinds of final products

Restricted substance/material/property	CAS	Limit/Requirement	Test method	Reporting limit
Check the ECHA website for the updated list <sup>3</sup>				
<b>Substances defined as hazardous due to intrinsic properties</b> Criteria for hazardous as defined in REACH Article 57 <sup>4</sup>	-	1000 ppm in each homogeneous part of the product, except if lower limit applies as per other part of this document.		

## SURFACE COATING, SURFACE TREATMENT, ADHESIVES AND HARDENERS

Restrictions is applicable for surface coating, surface treatment, adhesive and hardeners used in production of NCG products and packaging. The supplier shall make sure that only adhesives, hardeners, surface coating and treatments which are guaranteed by the producer to fulfil the requirements are used in the production. All products shall be used in accordance with process instructions established by the adhesive producer.

Restricted substance	CAS	Limit	Test method	Reporting limit
<b>Diisocyanates</b>				
Diphenylmethane diisocyanate (MDI)	101-68-8	H&M Group aim to as far as possible use safer alternatives to Diisocyanates containing adhesives, hardeners and surface coatings in the production or as far as possible use adhesives and hardeners with a concentration of diisocyanates individually and in combination less than 0,1 % by weight.  Shall not be used as substances on their own, as a constituent in other substances or in mixtures in production or by contractors unless: - The concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or	ISO 10283 Extraction with a dried solvent, derivatization followed by LC/MS determination.	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			
3,3'-dimethylbiphenyl-4,4'-diyl diisocyanate	91-97-4			
2,4,6-triisopropyl-m-phenylene diisocyanate	2162-73-4			

<sup>3</sup> [http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

<sup>4</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02006R1907-20150601&from=EN>

## SURFACE COATING, SURFACE TREATMENT, ADHESIVES AND HARDENERS

Restrictions is applicable for surface coating, surface treatment, adhesive and hardeners used in production of NCG products and packaging. The supplier shall make sure that only adhesives, hardeners, surface coating and treatments which are guaranteed by the producer to fulfil the requirements are used in the production. All products shall be used in accordance with process instructions established by the adhesive producer.

Restricted substance	CAS	Limit	Test method	Reporting limit
m-tolidene diisocyanate	26471-62-5	- Suppliers ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s). Training shall be according to requirements in EU regulation 2020/1149 <sup>5</sup> (amending Annex XVII in REACH) unless stricter local requirements are applied.		
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1			
2,4'-Methylenediphenyl diisocyanate	5873-54-1			
1,5-naphthylene diisocyanate	3173-72-6			
1,3- bis(isocyanatomethyl)benzene	3634-83-1			
2,2'-Methylenediphenyl diisocyanate	2536-05-2			
Triglycidyl isocyanurate (TGIC)	2451-62-9	Powder coating shall not contain TGIC hardener. Contamination limit 0.1% by weight	Self-declaration	

## PLASTIC, RUBBER, SILICON

Restricted substance	CAS	Limit	Test Method	Reporting Limit
<b>Polymers</b>				
Polystyrene (PS)	9003-53-6	Total ban in packaging including hangers will come into force January 1 <sup>st</sup> , 2030.	Input control	
Expanded Polystyrene (EPS)	9003-55-8			
High Impact Polystyrene (HIPS)	Etc.			
Acrylonitrile Butadiene Styrene (ABS)	9003-56-9	Total ban in packaging including hangers will come into force January 1 <sup>st</sup> , 2030		
Acrylonitrile Styrene/Styrene Acrylonitrile (AS/SAN)	9003-54-7			

<sup>5</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R1149&from=EN>

<b>PLASTIC, RUBBER, SILICON</b>				
<b>Restricted substance</b>	<b>CAS</b>	<b>Limit</b>	<b>Test Method</b>	<b>Reporting Limit</b>
Methyl Methacrylate Acrylonitrile Butadiene Styrene (MABS)	Various			
Styrene Methyl Methacrylate (SMMA)				
Acrylonitrile Ethylene Propylen Styrene (AES)				
Other Styrene based polymers				
Styrene based Thermoplastic Rubber (TPR)	Various			
Polycarbonate (PC)	80-05-7			
Polyvinylchloride (PVC)	9002-86-2	Usage ban	Input control or Beilstein's test and infrared spectroscopy (IR) with or without chemical separation	Qualitative
Polyvinylidenchloride	9002-85-1			
Polychloroprene	9010-98-4			
Bisphenols in Polycarbonate (PC)	80-05-7	Extractable amount: 1 ppm	Extraction with artificial sweat solution ISO 105 E04 and LC/MS analysis.	1 ppm
Butylhydroxytoluen (BHT)	128-37-0	25 ppm	ASTM D4275	5 ppm
Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs)	Various	Usage ban	Self-declaration	-
<b>Chlorophenols</b>				
Pentachlorophenol (PCP) and its salts and esters	87-86-5	Sum 0.5 ppm	EN 17134-2	0.05 ppm
<b>Tetrachlorophenol (TeCP) and its salts and esters</b>				
2,3,4,6-Tetrachlorophenol (2,3,4,6 TeCP)	58-90-2	Sum 0.5 ppm		
2,3,5,6 Tetrachlorophenol (2,3,5,6 TeCP)	935-95-5			
2,3,4,5-Tetrachlorophenol (2,3,4,5 TeCP)	4901-51-3			



<b>PLASTIC, RUBBER, SILICON</b>				
<b>Restricted substance</b>	<b>CAS</b>	<b>Limit</b>	<b>Test Method</b>	<b>Reporting Limit</b>
<b>Trichlorophenol (TrCP) and its salts and esters</b>				
2,3,4-Trichlorophenol (2,3,4 TriCP)	15950-66-0	Sum 2 ppm		
2,3,5-Trichlorophenol (2,3,5 TriCP)	933-78-8			
2,3,6-Trichlorophenol (2,3,6 TriCP)	933-75-5			
2,4,5-Trichlorophenol (2,4,5 TriCP)	95-95-4			
2,4,6-Trichlorophenol (2,4,6 TriCP)	88-06-2			
3,4,5-Trichlorophenol (3,4,5 TriCP)	609-19-8			
<b>Dimethylformamide (DMFa)</b>	68-12-2	1000 ppm	EN 17131	10 ppm
<b>Diisocyanates</b>				
Diphenylmethane diisocyanate (MDI)	101-68-8	Not detected: sum of listed diisocyanates	ISO 10283 Extraction with a dried solvent, derivatization followed by LC/MS determination.	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			
3,3'-dimethylbiphenyl-4,4'-diyl diisocyanate	91-97-4			
2,4,6-triisopropyl-m-phenylene diisocyanate	2162-73-4			
m-tolylidene diisocyanate	26471-62-5			
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1			
2,4'-Methylenediphenyl diisocyanate	5873-54-1			
1,5-naphthylene diisocyanate	3173-72-6			
1,3- bis(isocyanatomethyl)benzene	3634-83-1			
2,2'-Methylenediphenyl diisocyanate	2536-05-2			
<b>Phenols</b>				
<b>o-Phenylphenol (OPP)</b>	90-43-7			
Soft Home Interior Products/Interior products	-	100 ppm	EN 17134-2	5 ppm

<b>PLASTIC, RUBBER, SILICON</b>				
<b>Restricted substance</b>	<b>CAS</b>	<b>Limit</b>	<b>Test Method</b>	<b>Reporting Limit</b>
<b>Polyaromatic Hydrocarbons (PAH)</b>				
Benzo(a)anthracene	56-55-3	1 ppm	AfPS GS 2019 Extraction with toluene followed by GC-MS analysis	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	No individual restriction		
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		<2 ppm	
Sum of 18 PAH	-	<10 ppm		
<b>Polychlorinated Biphenyls (PCB)</b>	1336-36-3	The sum < 0.5 ppm	Solvent extraction and analysis by GC-MS	0.1 ppm
<b>Polychlorinated Triphenyls (PCT)</b>	61788-33-8			
<b>Carbon black pigment</b>				
Carbon black Pigment PBK7	1333-86-4	Usage ban in packaging pigments	TGA or ASTM D1514	Input ban

<b>PAPER &amp; CARDBOARD</b>				
<b>Restricted substance</b>	<b>CAS</b>	<b>Limit</b>	<b>Test Method</b>	<b>Reporting Limit</b>
<b>Bisphenols in thermal paper, e.g. Receipts</b>				
Bisphenol A (BPA)	80-05-7	Usage ban	Organic solvent extraction (ACN) followed by LC/MS determination.	
Bisphenol S (BPS)	80-09-1			
Bisphenol F (BPF)	620-92-8			
<b>Chlorophenols</b>				
Pentachlorophenol (PCP) and its salts and esters	87-86-5	0.5 ppm	EN 17134-2	0.05 ppm
<b>Elemental chlorine bleach</b>				
	-	Usage ban	Self-declaration	
<b>Printing ink</b>				
Printing ink consisting of mineral oil (MOAH) with 1 to 7 aromatic rings	Various (eg. Paraffin oils: 64742-46-7, 72623-86-0, 8042-47-5, 9862-82-3)	≤ 1 % (w/w) MOAH  Requirement limited to printing ink to be used for paper packaging and printed material provided to the public.  As specified in French law 2020-105 of 10 February 2020, Article 112	Self-Declaration	1,0 % w/w
<b>Carbon black pigment</b>				
Carbon black Pigment PBK7	1333-86-4	Usage ban in packaging pigments	TGA or ASTM D1514	Input ban

<b>China</b>				
<b>PAPER &amp; CARDBOARD</b> (Chinese regulation GB 43352 is only affecting the Ecom package)				
<b>Restricted substance</b>	<b>CAS</b>	<b>Limit</b>	<b>Test Method</b>	<b>Reporting Limit</b>
Lead (Pb)	7439-92-1	50 ppm	GB/T 37837-2019	
Mercury (Hg)	7439-97-6	0.5 ppm	GB/T 37837-2019	
Chromium (Cr)	18540-29-9	0.5 ppm	GB/T 37837-2019	
Total amount of Lead, Mercury, Chromium, Cadmium	7440-02-0	100 ppm	GB/T 37837-2019	

## Appendix A

**Table 1 - List of restricted PFC/PFAS**

Perfluorinated Compounds (PFC/PFAS) - This list does not claim to be complete of restricted perfluorinated compounds			
Substance	CAS	Substance	CAS
Perfluorobutane Sulfonate (PFBS)	29420-49-3	1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7
Perfluorohexane Sulfonate (PFHxS)	3871-99-6	1H,1H,2H,2H-Perfluoro-1-dodecanol (10:2 FTOH)	865-86-1
Perfluoroheptane Sulfonate (PFHpS)	375-92-8	2-(N-methylperfluoro-FASE 1 octanesulfonamido)-ethanol (MeFOSE)	2448-09-7
Perfluorooctane Sulfonate (PFOS)	56773-42-3	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2
Perfluorodecane Sulfonate (PFDS)	126105-34-8	N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8
Perfluorooctane Sulfonamide (PFOSA) 1H,1H,2H,2H H4PFOS; 6:2	754-91-6	N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2
Perfluorobutane Acid (PFBA)	375-22-4	7H-dodecanefluoroheptane Acid (HPFHpA)	1546-95-8
Perfluoropentane Acid (PFPA)	2706-90-3	2H,2H-perfluorodecane Acid (H2PFDA)	-
Perfluorohexane Acid (PFHxA)	307-24-4	2H,2H,3H,3H-Perfluoroundecanoic Acid (H4PFUnA)	34598-33-9
Perfluoroheptane Acid (PFHpA)	375-85-9	1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6
Perfluorooctanoic Acid (PFOA)	335-67-1	1H,1H,2H,2H-Perfluorodecylacrylate (8:2 FTA)	27905-45-9
Perfluorononane Acid (PFNA)	375-95-1	1H,1H,2H,2H-Perfluorododecylacrylate (10:2 FTA)	17741-60-5
Perfluorodecane Acid (PFDA)	335-76-2	1H,1H,2H,2H-Perfluoro-1-hexanol (4:2 FTOH)	2043-47-2
Perfluoroundecanoic Acid (PFUnA)	4234-23-5	1H,1H,2H,2H-Perfluoro-1-oktanol (6:2 FTOH)	647-42-7
Perfluorododecanoic Acid (PFDoA)	307-55-1	Perfluorotetradecanoic Acid (PFTeA)	376-06-7
Perfluorotridecanoic Acid (PFTrA)	72629-94-8	Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6

**Table 2 – List of flame retardants**

Flame retardants				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Decabromodiphenyl ethane (DBDPE)	84852-53-9		EN ISO 17881-1:2016	5 ppm
Pentabromodiphenyl ether (PentaBDE)	32534-81-9			

Octabromodiphenyl ether (OctaBDE)	32536-52-0	5 ppm <sup>6</sup>		
Decabromodiphenyl ether (DecaBDE)	1163-19-5			
Polybrominated diphenyl ethers (PBDE)	Various			
Polybromobiphenyls (PBB)	Various			
Tetrabromobisphenol A (TBBP A)	79-94-7			
Hexabromocyclododecane (HBCDD)	3194-55-6			
2,2-Bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0			
Bis(2,3-dibromopropyl)phosphate (BDBPP/BIS)	5412-25-9			
Tris(1,3-dichloro-isopropyl)phosphate (TDCCP)	13674-87-8			
Trixylyl phosphate (TXP)	25155-23-1			
Tris(2,3-dibromopropyl)phosphate (TRIS)	126-72-7			
Tris-(aziridinyl)-phosphine oxide (TEPA)	545-55-1			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8			
Tri-o-cresyl phosphate	78-30-8			
Triphenyl phosphate (TPhP)	115-86-6			
Tris(1-chloro-2-propyl)phosphate (TCPP, TMCP)	13674-84-5			
			EN ISO 17881-2:2016	

**Table 3 – List of phthalates**

Phthalates – including all other esters of ortho-phthalic acid				
Restricted substance	CAS no	Limit/Requirement	Test method	Reporting limit
Butyl benzyl phthalate (BBP)	85-68-7	500 ppm, per phthalate. The sum of phthalates ≤ 1000 ppm	<b>Sample preparation:</b> CPSC-CH-C1001-09.3  <b>Measurement:</b> <b>Textile:</b> GC-MS, ISO 14389 <b>Other materials:</b> GC/MS	Matrix dependent
Dibutyl phthalate (DBP)	84-74-2			
Di(2-ethylhexyl) phthalate (DEHP)	117-81-7			
Diisobutyl phthalate (DIBP)	84-69-5			
Diisodecyl phthalate (DIDP)	26761-40-0			
Diisononyl phthalate (DINP)	28553-12-0			
Di-n-octyl phthalate (DNOP)	117-84-0			
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8			
Di-n-hexyl phthalate (DnHP)	84-75-3			
Dinonyl phthalate (DNP)	84-76-4			
Diethyl phthalate (DEP)	84-66-2			

<sup>6</sup> During a transition period until we have a more sustainable material in hangers, recycled polystyrene for use in hangers is exempt provided the flame retardants are unintentionally added. Instead, the limit for the sum of PBDE's, TPhP and TBBPA is 1000 mg/kg. The provisional limit is valid until 31 Dec 2023.



Di-n-propyl phthalate (DPRP)	131-16-8			
Diisopentylphthalate (DIPP)	605-50-5			
n-Pentylisopentylphthalate (NPIPP)	776297-69-9			
Di-cyclohexyl phthalate (DCHP)	84-61-7			
Di-iso-octyl phthalate (DIOP)	27554-26-3			
Di-n-pentylphthalate (DPP)	131-18-0			
Dihexylphthalate, branched and linear	68515-50-4			
Dimethylphthalate (DMP)	131-11-3			
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0			
1,2-benzenedicarboxylic acid, di-C7-11-branched and linearalkyl esters (DHNUP)	68515-42-4			
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6			

## Annex B. Clarification on Plastic phaseouts 2030

### POLYCARBONATE (PC)

#### Requirement

<i>Substances and/or materials</i>	<i>CAS</i>	<i>Limit/Requirement</i>	<i>Test/Compliance method</i>	<i>Reporting limit</i>
Polycarbonate (PC)	80-05-7	Upcoming restriction for Packaging and NCG by 2030. This restriction applies to both virgin and recycled PC.	Input control.	

#### Background

Polycarbonate (PC) is one of the most widely used engineering thermoplastics. Polycarbonate is a strong, tough materials, and some grades are optically transparent. It is easily worked, moulded, and thermoformed. Because of these properties, PC finds many applications.

Product compliance and Sustainability have identified PC as one of the polymers to be substituted since it is characterized by limited recyclability and use of high concern substances in the manufacturing process. Furthermore, products made from PC can contain the precursor monomer bisphenol A (BPA) which is a widely studied endocrine-disrupting chemical (EDC) causing adverse health effects in humans.

The substitution of PC is crucial to reach H&M Group 2030 goal on recycled and other sustainably sourced material as well as safe products and production for the environment, workers, and customers.

## STYRENE-BASED POLYMERS

### Requirement

<i>Substances and/or materials</i>	<i>CAS</i>	<i>Limit/Requirement</i>	<i>Test/Compliance method</i>	<i>Reporting limit</i>
<i>Styrene-based polymers</i>	<i>Various</i>	Upcoming restriction for Packaging and NCG by 2030. This restriction applies to both virgin and recycled PC.	Input control.	

### Background

Styrene-based polymers or Styrenics cover a full range of materials from commodity grades including general-purpose and high-impact polystyrene (GPPS, HIPS), styrene-acrylonitrile (SAN), and acrylonitrile-butadiene-styrene (ABS).

Product compliance and Sustainability have identified:

- Polystyrene (PS)
- Acrylonitrile Butadiene Styrene (ABS)
- Acrylonitrile Styrene/Styrene Acrylonitrile (AS/SAN)
- Other Styrene-based polymers

as polymers to be substituted due to limited recyclability, use of chemicals of high concern in the manufacturing process. Styrene, the building monomer of this polymers group, is suspected to have hormone disrupting properties and can cause cancer. Styrene is regulated in California and has a harmonized classification as Reprotoxic category 2 - Suspected of damaging the unborn child, according to the European Chemicals Agency. Additives that have hazardous properties are commonly used in styrene-based polymers which adds an extra problematic aspect to securing recycled material.

The substitution of Styrene-based polymers is crucial to reach H&M Group 2030 goal on recycled and other sustainably sourced material as well as safe products and production for the environment, workers, and customer.

## STYRENE-BASED THERMOPLASTIC RUBBER (TPR)

### Requirement

<i>Substances and/or materials</i>	<i>CAS</i>	<i>Limit/Requirement</i>	<i>Test/Compliance method</i>	<i>Reporting limit</i>
<b>Styrene-based Thermoplastic Rubber (TPR)</b>	<i>Various</i>	Upcoming restriction for Packaging and NCG by 2030. This restriction applies to both virgin and recycled PC.	Input control.	

### Background

Thermoplastic rubber (TPR) is a semi-crystalline material with both rubber-like and thermoplastic properties. This means it is flexible and can be manufactured using melt processing techniques like injection molding. TPR material is synthesized using block copolymers like SBS (Styrene-Butadiene-Styrene). Thermoplastic rubber can also be described as a thermoplastic elastomer (TPE).

Product compliance and Sustainability have identified TPR as a class of polymers to be substituted due to the use of Styrene as building monomer. The substitution of TPR is crucial to reach H&M Group 2030 goal on recycled and other sustainably sourced material as well as safe products and production for the environment, workers, and customers.

## Version history table

Version	Date	Valid from	Changes made	Page or Chapter
1	January 2020	January 2020	Implemented in the HIQS	-
2	January 2021	January 2021	Care label, size labels and inside prints clarified	10
			Exception for flame retardants in recycled PS	13
			Polystyrene (PS) is banned as a packaging material	16
			Cationic Surfactants restriction removed to align with CR Commercial goods	16
			Aniline restriction removed to align with CR Commercial goods	18
			Octamethylcyclotetrasiloxane is removed but is still regulated as SVHC	19
			Butylhydroxytoluen (BHT) is restricted in plastic	21
			Bisphenol F is banned in receipts	25
3	February 2022	February 2022	Examples of products and what sections should be followed are added	7
			BPA restriction added to all material	9
			Exception for flame retardants in recycled PS extended until end of 2023	10
			Nanomaterial restriction added	11
			Clarifies that all perfluorinated compounds are banned	12
			Upcoming material restrictions for polymers added.	14
			End date of allowed usage of PS in packaging and hangers added.	14
			Restrictions for Carpets and Mats moved to section All material	14
			Restrictions for Surface coating/treatment, adhesive and hardeners are applicable for production.	14
			Training requirement for workers handling Diisocyanates added	14
			All textiles shall comply with AFIRM RSL	15
4	January 2023	January 2023	General formatting changes, all mg/kg changed to ppm	All
			Referred to all H&M Group RSLs in General	3
			Electronics requirements removed referred to separate RSL	3
			Textiles requirement removed referred to separate RSL	3
			Updated abbreviations and definitions	5, 6
			Emitted substance and odor, merged category	13
			All heavy metal requirements moved into general requirements	11-13
			All polymer requirements moved to plastic requirements	18
			New tables created in appendix for phthalates and flame retardants	25, 26

5	January 2024	January 2024	Added Carbon black pigment to plastic and paper requirements.	18
			Added Chromium requirement to plastic.	8
			Added annex B clarifying plastic phaseout as part of PSWG project.	23-25
			for chlorinated paraffins, the method updated to ISO 22818:2021	6
			for Lead, reporting limit might be added, e.g. 1 ppm	8
			for Nickel release, method updated to EN 12472:2020 and EN 1811:2023	8
			for PFAS, method updated to EN ISO 23702-1 or EN 17681-1 & -2	12
			for Phthalates, CPSC method updated to CPSC-CH-C1001-09.4	12
6	January 2025	January 2025	for chlorophenols and OPP, method updated to EN 17134-2	15, 18
			for PAH, method updated to AfPS GS 2019	17
			Furniture requirements removed referred to separate RSL	3
			Construction material requirement removed.	3
			Clarification on ban on Styrene based polymers.	13
			Removal of Foam	13
			Removal of Bamboo, wood, composite wood, rattan & straw	17
			Added test requirements for Chinese regulation GB 43352	18