



H&M Chemical Restrictions

Manufacturing Restricted Substance List (MRSL)

Global Sustainability Department

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Valid for all brands in H&M Group

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General

H&M has with concern for the health of customers as well as for the environment and working conditions, established H&M Chemical Restrictions for all products. H&M Chemical Restrictions consist of several parts with regard to product types. All products must fulfill their corresponding parts in Chemical restriction and also must fulfill H&M Manufacturing Restricted Substance List (MRSL).

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 Chemical Restrictions. It is the Supplier's responsibility to assure compliance with H&M Chemical Restrictions and to inform all their downstream suppliers and subcontractors about the content of H&M 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 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 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 result will prevail.

Definitions

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.
Kinematic Limit	Describes how fast a fluid is spread on a flat surface in relation to its mass, i.e. weight.
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 SD.
Substances defined as hazardous due to intrinsic properties.	Persistent, bio accumulative and toxic (PBT), very persistent and very bio accumulative (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.
CI no	Color Index number
MRSL	Manufacturing Restricted Substances List
ppm	Parts per million, which is the same as mg/kg.
Percentage	Percentage is weight by weight, % w/w
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.

Information and Guidelines

The Manufacturing Restricted Substances List (MRSL) consists of hazardous substances potentially used in manufacturing. These substances may be especially harmful for workers and/or the environment if not handled properly. By restricting intentional use of these chemicals in the production we protect workers and the environment.

Restricted substances are classified into two major groups according to the level of restriction as listed below:

GROUP	Restricted Level	
	Production Sites	H&M Production Lines
1	USAGE BAN	USAGE BAN
2	No requirement	USAGE BAN

Requirement

GROUP 1 - Substances are not allowed to be found in H&M production sites and used in H&M production.		
Restricted substance	CAS No.	Remark
Alkylphenol Ethoxylates / Alkylphenols (APEOs/APs)		
Nonylphenol Ethoxylates (NPE)	Various	
Octylphenol Ethoxylates (OPE)	Various	
Nonylphenol (NP)	Various	
Octylphenol (OP)	Various	
Chlorinated Aromatic Hydrocarbons		
Chlorobenzenes	Various	
Chloronaphthalenes	Various	
Chlorortoluenes	Various	
Chloroxylenes	Various	
Chlorinated Bleaching Agents		Finishing treatments with chlorinated bleaching agents can be used in denim production only.

Restricted substance	CAS No.	Remark
Chlorinated Organic Solvents		
1,2-Dichloroethane	107-06-2	
1,1-Dichloroethylene	75-35-4	
Methylene Chloride	75-09-2	
cis-1,2-Dichloroethylene	156-59-2	
trans-1,2-Dichloroethylene	156-60-5	
chloroform	67-66-3	
1,1,1-Trichloroethane	71-55-6	
Carbon Tetrachloride	56-23-5	
Trichloroethylene	79-01-6	
1,1,2-trichloroethane	79-00-5	
1,1,1,2-tetrachloroethane	630-20-6	
Tetrachloroethylene	127-18-4	
Dimethylformamide (DMF)		
Dimethylformamide (DMF)	68-12-2	Usage ban except during production. Please see below for more info about PU production.
Organic Solvents		
Benzene (Benzol)	71-43-2	
1,4-Butanediol	110-63-4	
Dimethylacetamide (DMAC)	127-19-5	
Ethylene glycol monoethyl ether	110-80-5	
n-Hexane	110-54-3	
4,4'-Methylene-bis-(2-chloroaniline) (MOCA)	101-14-4	
Phenol	108-95-2	
Toluene (Toluol)	108-88-3	
Xylene	1330-20-7, 95-47-6, 108-38-3, 106-42-3	
o-cresol	95-48-7	
p-cresol	106-44-5	
m-cresol	108-39-4	

GROUP 2- Substances are not allowed to be used in H&M production.		
Restricted substance	CAS No.	Remark
Chloroparaffins		
Short chained (SCCPs) C10-C13	85535-84-8	
Chlorophenols		
Pentachlorophenol (PCP) and its salts and esters	87-86-5	
Tetrachlorophenol (TeCP) and its salts and esters	58-90-2, 25167-83-3	
Mono, di- and tri-chlorophenol	Various	
Dyes – Azo releasing following amines		
4-Aminodiphenyl	92-67-1	
2-Amino-4-nitrotoluene	99-55-8	
Benzidine	92-87-5	
4-Chloro-o-toluidine	95-69-2	
2,4-Diaminoanisole	615-05-4	
3,3'-Dichlorobenzidine	91-94-1	
3,3'-Dimethoxybenzidine (o-Dianisidine)	119-90-4	
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	838-88-0	
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	
4,4'-Diaminodiphenylmethane	101-77-9	
4,4'-Methylene-bis-(2-chloroaniline) (MOCA)	101-14-4	
2-Naphtylamine	91-59-8	
o-Aminoazotoluene	97-56-3	
o-Anisidine	90-04-0	
o-Toluidine	95-53-4	
4,4'-Oxydianiline	101-80-4	
4,4'-Thiodianiline	139-65-1	
2,4-Toluenediamine	95-80-7	
2,4,5-Trimethylaniline	137-17-7	
p-Aminoazobenzene	60-09-3	

Restricted substance	CAS No.	Remark
p-Chloroaniline	106-47-8	
p-Cresidine	120-71-8	
2,4-Xylidine	95-68-1	
2,6-Xylidine	87-62-7	
Other dyes/ CI no		
C.I. Direct Black 38	1937-37-7	
C.I. Direct Blue 6	2602-46-2	
C.I. Acid Red 26	3761-53-3	
C.I. Basic Red 9	569-61-9	
C.I. Direct Red 28	573-58-0	
C.I. Basic Violet 14	632-99-5	
C.I. Disperse Blue 1	2475-45-8	
C.I. Disperse Blue 3	2475-46-9	
C.I. Basic Blue 26 (with Michler's Ketone > 0.1%)	2580-56-5	
C.I. Basic Green 4 (Malachite green chloride)	569-64-2	
C.I. Basic Green 4 (Malachite green oxalate)	2437-29-8	
C.I. Basic Green 4 (Malachite green)	10309-95-2	
Disperse (Sensitizing)		
Disperse Orange 11	82-28-0	
Disperse Yellow 1	119-15-3	
Disperse Blue 102	12222-97-8	
Disperse Blue 106	12223-01-7	
Disperse Yellow 39	12236-29-2	
Disperse Orange 37/59/76	13301-61-6	
Disperse Brown 1	23355-64-8	
Disperse Orange 1	2581-69-3	
Disperse Yellow 3	2832-40-8	
Disperse Red 11	2872-48-2	

Restricted substance	CAS No.	Remark
Disperse Red 1	2872-52-8	
Disperse Red 17	3179-89-3	
Disperse Blue 7	3179-90-6	
Disperse Blue 26	3860-63-7	
Disperse Yellow 49	54824-37-2	
Disperse Blue 35	12222-75-2	
Disperse Blue 124	61951-51-7	
Disperse Yellow 9	6373-73-5	
Disperse Orange 3	730-40-5	
Disperse Blue 35	56524-77-7	
Navy Blue Colorant		
Component 1: C39H23ClCrN7O12S·2Na	118685-33-9	
Component 2: C46H30CrN10O20S2·3Na	Not Allocated	
Anilines		
Aniline	62-53-3	
Flame retardants		
Tris(2,3-dibromopropyl)phosphate (TRIS)	126-72-7	
Bis(2,3-dibromopropyl)phosphate	5412-25-9	
Tris-(aziridinyl)-phosphineoxide (TEPA)	5455-55-1	
Polybrominated Diphenyl Ethers (PBDE)	Various	
Tetrabromobisphenol A (TBBP A)	79-94-7	
Polybrominated Biphenyls (PBB)	Various	
Tri-o-cresyl phosphate	79-30-8	
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	
Hexabromocyclododecane	3194-55-6	
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	

Restricted substance	CAS No.	Remark
Glycols		
Bis(2-methoxyethyl)-ether	111-96-6	
2-Ethoxyethyl acetate	111-15-9	
Ethylene glycol dimethyl ether	110-71-4	
2-Methoxyethanol	109-86-4	
2-Methoxyethylacetate	110-49-6	
2-Methoxypropylacetate	70657-70-4	
Triethylene glycol dimethyl ether	112-49-2	
Heavy metals²		
Arsenic (As)	7440-38-2	
Cadmium (Cd)	7440-43-9	
Chromium (Cr)	18540-29-9	
Lead (Pb)	7439-92-1	
Mercury (Hg)	7439-97-6	
Organotin Compounds		
Dibutyltin (DBT)	1002-53-5	
Dimethyltin (DMT)	Various	
Diocetyl tin (DOT)	-	
Monobutyltin (MBT)	Various	
Monooctyltin (MOT)	Various	
Tetrabutyltin (TebT)	Various	
Tributyltin (TBT)	56573-85-4	
Tricyclohexyltin (TCyHT)	6056-50-4	
Triocetyl tin (TOT)	250252-89-2	
Triphenyltin (TPhT)	668-34-8	
Tripropyltin (TPT)	-	
Other tri-substituted organotins	Various	

² Lead is allowed in a few applications due top regulatory exceptions in REACH Annex XVII, RoHS-directive 2011/65/EU and US regulation 16 CFR 1303

Restricted substance	CAS No.	Remark
Perfluorinated Compounds (PFCs)		
Perfluorobutane Sulfonate (PFBS)	29420-49-3	
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	
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	
Perfluoro-3,7-dimethyloctanoic Acid (PF-3,7-DMOA)	172155-07-6	
7H-Dodecafluoroheptane 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	

Restricted substance	CAS No.	Remark
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)	2448-09-7	
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	
Phthalates		
Butyl benzyl phthalate (BBP)	85-68-7	
Dibutyl phthalate (DBP)	84-74-2	
Diethyl phthalate (DEP)	84-66-2	
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-hexyl phthalate (DnHP)	84-75-3	
Di-n-octyl phthalate (DnOP)	117-84-0	
All other phthalates /all other esters of o-phthalic acid)	Various	
Phenols		
o-Phenylphenol (OPP)	90-43-7	
Polychlorinated Compounds		
Polychlorinated Biphenyls (PCB)	1336-36-3	
Polychlorinated Triphenyls (PCT)	61788-33-8	
Polycyclic Aromatic hydrocarbons (PAHs)		
Acenaphthene	83-32-9	
Acenaphthylene	208-96-8	
Anthracene	120-12-7	

Restricted substance	CAS No.	Remark
Benzo[a]anthracene	56-55-3	
Benzo[a]pyrene (BaP)	50-32-8	
Benzo[b]fluoranthene	205-99-2	
Benzo[e]pyrene	192-97-2	
Benzo[ghi]perylene	191-24-2	
Benzo[j]fluoranthene	205-82-3	
Benzo[k]fluoranthene	207-08-9	
Chrysene	218-01-9	
Dibenz[a,h]anthracene	53-70-3	
Fluoranthene	206-44-0	
Fluorene	86-73-7	
Indeno[1,2,3-cd]pyrene	193-39-5	
Naphthalene	91-20-3	
Phenanthrene	85-01-8	
Pyrene	129-00-0	
<i>Polyvinylchloride (PVC) and similar chlorinated polymers, e.g. Polyvinylidenchloride and Polychloroprene (neoprene)</i>		
Polyvinylchloride (PVC)	9002-86-2	
Polyvinylidenchloride	9002-85-1	
Polychloroprene	9010-98-4	
<i>Solvent based Glues</i>		
Organic solvent based systems shall be exchanged to water based systems. ³		
<i>Solvent based Polyurethane, PU</i>		
Shall be exchanged to water based systems in cases where it is technically possible.		

³ Supplier must always get an approval from H&M Global Sustainability Department before using any non-water based systems