# H&M GROUP CHEMICAL RESTRICTIONS 2023

## RESTRICTED SUBSTANCES LIST (RSL)

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Hardline

Group Compliance  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 Hardline 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].

Hardline, which in its design suggests a function as food contact products, e.g. candleholder shaped as a coffee cup, has to comply with *H&M Group Chemical Restrictions Food contact products* or has to be labelled with ”Not for food - Decorative use only”.

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.

| | |
|---|---|
|  | ➢ **Soap dispenser**<br>➢ **Frames**<br>➢ **Knobs**<br>➢ **Candleholders**<br>➢ **Vases**<br>➢ **Posters**<br>➢ **Others** |
|  | Hardline with textile detail<br>➢ Follow **H&M Group Chemical Restrictions Textile Products, Accessories, Footwear, Bags and Belts**<br>➢ Follow **H&M Group Chemical Restrictions Toys** |

## 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. |
| 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 |

[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** |
| **Biocidal compounds** | Various | Are not allowed to be used without approval by H&M Group | Input control | N/A |
| **Flame retardants[3]** | | | | |
| 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 | | | |
| 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 | | | |
| Tris(1,3-dichloroisopropyl)phosphate (TDCP) | 13674-87-8 | | | |
| Triphenyl phosphate (TPhP) | 115-86-6 | | | |

[3] 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** |
| **Lead (Pb)** | 7439-92-1 | 90 ppm[4] | Metal Products: CPSC-CH-E1001-08.3 | 1 ppm |
| | | | Non-metal Products: CPSC-CH-E1002-08.3 | 1 ppm |
| **Nanomaterials**<br>"'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."[5] | Various | Usage ban[6] | Input control | N/A |
| **Perfluorinated Compounds (PFCs)** | | | | |
| Perfluorobutane Sulfonate (PFBS) | 29420-49-3 | Not detected | For FTOHs:<br>Solvent extraction according to Draft CEN/TS 15968 and analysis by Gas Chromatograph Mass Spectrometer (GC-MS-MS)<br><br>For Others:<br>Draft CEN/TS 15968<br>Solvent extraction and analysis by Liquid Chromatograph Tandem Mass Spectrometer (LC-MS-MS) | For FTOHs:<br>10 µg/m2<br><br>For Others:<br>1 µg/m2 |
| 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)<br>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 | | | |

[4] Other limits apply if otherwise stated in this document for respective material.

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

[6] 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** |
| 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 | | | |
| 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<br><br>For High matrix samples (silicone & |
| Dioctyltin (DOT) | 94410-05-6 | 1 ppm | | |
| Tributyltin (TBT) | 56573-85-4 | | | |

| All materials | | | | |
|---|---|---|---|---|
| **Requirement** | **CAS no** | **Limit/ Requirement** | **Test method** | **Reporting limit** |
| Tricyclohexyltin (TCyHT) | 6056-50-4 | Sum = Not detected | | rubber): 0.5 ppm |
| 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 | | | |
| Naphthalene | 91-20-3 | <2 ppm | | |
| **Sum of 18 PAH** | | <10 ppm | | |
| **Polymers** | | | | |
| Polycarbonate (PC) | 80-05-7 | Usage ban will come into force Dec 31st 2023. Applies to both virgin and recycled material. | Input control | N/A |
| Polystyrene (PS)<br>Expanded Polystyrene (EPS)<br>High Impact Polystyrene (HIPS) | 9003-53-6, 9003-55-8, etc. | Usage ban will come into force Dec 31st 2023. Applies to both virgin and recycled material. | Input control | N/A |
| Styrene-based Thermoplastic Rubber (TPR)<br>Styrene-based Thermoplastic Elastomer (TPE) | Various | Usage ban will come into force Dec 31st 2023. Applies to both virgin and recycled material. | Input control | N/A |
| Acrylonitrile Styrene/Styrene Acrylonitrile (AS/SAN) | Various | Usage ban will come into force Dec 31st 2023. Applies to both virgin and recycled material. | Input control | N/A |

| All materials | | | | |
|---|---|---|---|---|
| **Requirement** | **CAS no** | **Limit/ Requirement** | **Test method** | **Reporting limit** |
| **SVHC**<br>Check the ECHA website for the updated Candidate List of Substances of Very High Concern for Authorisation [7] | | 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**<br>Criteria for hazardous as defined in REACH Article 57[8] | | 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 |
| **Chloroparaffins** | | | | |
| Short chained chloroparaffins (SCCPs) C10-C13 | 85535-84-8 | Not detected | ISO 18219<br>N-hexane extraction, ultrasound (60°C, 60 min) and analysis by GC-MS using NCI (Negative Chemical Ionization) | 30 ppm |
| **Formaldehyde**<br>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** | | | | |

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

[8] 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** |
| 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 | | |
| 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[9] | | 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<br>Abrasion of coated items by EN 12472 | 0.05 µg/cm$^2$/week |

## 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:<br>Extraction with artificial sweat solution (ISO 105 E04) and BPA<br>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) | 0.05 ppm |

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

| Plastic & Rubber including Foam | | | | |
|---|---|---|---|---|
| **Restricted substance** | **CAS no** | **Limit/Requirement** | **Test method** | **Reporting limit** |
| Tetrachlorophenol (TeCP) and its salts and esters | Various, e.g. 58-90-2 | Sum < 0.5 ppm | KOH extraction direct LC-MS analysis or derivatisation followed by GC-MS analysis | 0.05 ppm |
| **Chloroparaffins** | | | | |
| Short chained chloroparaffins (SCCPs) C10-C13 | 85535-84-8 | Not detected | N-hexane extraction, ultrasound (60°C, 60 min) and analysis by GC-MS using NCI (Negative Chemical Ionization)<br>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** | | | | |
| 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 | | |

| Plastic & Rubber including Foam | | | | |
|---|---|---|---|---|
| **Restricted substance** | **CAS no** | **Limit/Requirement** | **Test method** | **Reporting limit** |
| **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 | | | |
| 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 | | | |

| Paper & Board | | | | |
|---|---|---|---|---|
| **Restricted substance** | **CAS no** | **Limit/Requirement** | **Test method** | **Reporting limit** |
| 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[10] must comply with TSCA Title VI | ASTM E1333 ASTM D6007 | - |
| **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[11] | Self declaration | - |

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

[11] Please contact your local production office.

## Terracotta, Enamel, Concrete, Soapstone[12], Marble[13], 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.<br><br>Using HF in silica-based pigments are encountered. | 1 ppm |
| **Arsenic (As)** | 7440-38-2 | 100 ppm | EN 16711-1, analysis by ICP-MS | |

[12] It is important to ascertain the region of mining for soapstone as it can contain asbestos depending on where it is originated.
[13] It is important to ascertain the region of mining for marble as it can contain heavy metals depending on where it is originated.