



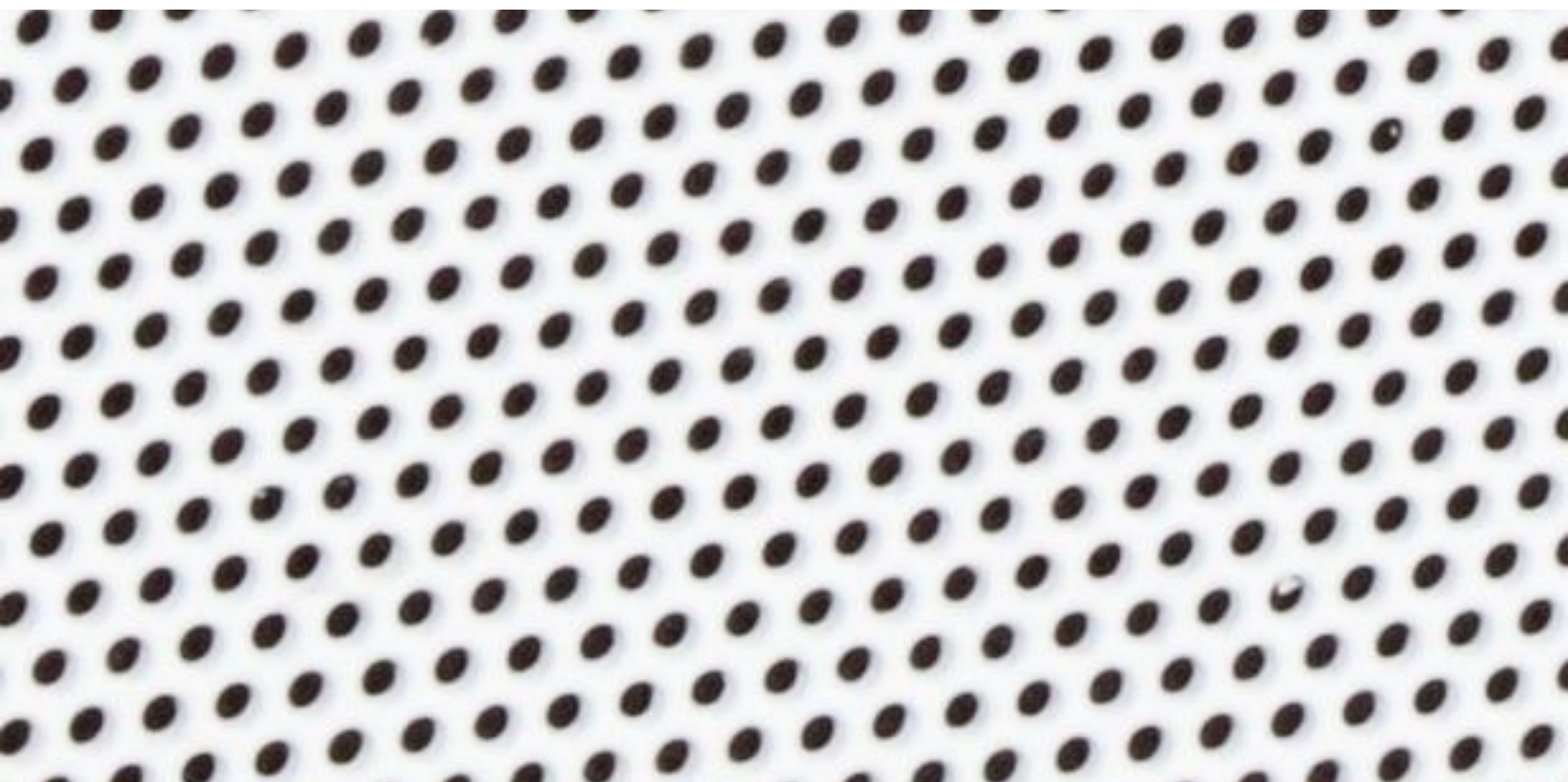
# H&M GROUP CHEMICAL RESTRICTIONS 2022

## RESTRICTED SUBSTANCES LIST (RSL)

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### Electrical and Electronic Products and Batteries

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 regards to product type. This document concerns Electrical and Electronic Products and Batteries. 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*<sup>1</sup>. 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*<sup>1</sup>.

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.

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<sup>1</sup> Publicly available

## Examples

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

	<ul style="list-style-type: none"> <li>➤ <b>Watches</b> Wristband should follow H&amp;M Group Chemical Restrictions Apparel/Accessories/Footwear/Home Interior Textile Products</li> <li>➤ <b>Headphones</b></li> <li>➤ <b>Lamps</b></li> <li>➤ <b>Portable batteries</b></li> </ul>
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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.
Homogeneous	Uniform composition throughout, i.e. a material that cannot be mechanically disjointed into different materials.
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.
ppm	Parts per million, which is the same as mg/kg.
REACH	Registration, Evaluation, Authorization and restriction of Chemicals
SVHC	Substances of Very High Concern

## Requirements – All Electric and Electronic Equipment

Requirement	Limit/requirement
<b>EU Directive 2011/65/EU – RoHS<sup>2</sup></b>	All electrical and electronic equipment must comply with EU directive 2011/65/EU including its amendments. Valid test reports and certificates must be available. Test method: IEC 62321
<b>China RoHS<sup>3</sup></b>	All electrical and electronic equipment destined for China must be tested and comply with China RoHS. Test method: GB/T 26572

## Requirements – Materials

Restricted substance	CAS no	Concentration Limit/Requirement	Test method
<b>Biocidal compounds</b>	Various	Are not allowed to be used without approval by H&M Group	Input control
<b>Flame Retardants<sup>4</sup></b>			
Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	1000 ppm	Methanol extraction and analysis by GC-MS and LC-MS
Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)	13674-87-8	1000 ppm	
Hexabromocyclododecane	3194-55-6 25637-99-4, 134237-50-6, 134237-51-7, 134237-52-8	50 ppm	Methanol extraction and analysis by GC-MS and LC-MS
<b>Organotin Compounds</b>			
Dibutyltin (DBT)	1002-53-5	1 ppm	ISO/TS 16179 (modified) Methanol/Ethanol extraction, derivatization and analysis by GC-MS
Diocetyl tin (DOT)	94410-05-6	1 ppm	
Tributyltin (TBT)	56573-85-4	Sum = Not detected	
Tricyclohexyltin (TCyHT)	6056-50-4		
Triocetyl tin (TOT)	250252-89-2		
Triphenyltin (TPhT)	668-34-8		
Other not listed trisubstituted organotins	Various	Sum < 1 ppm	
<b>Chloroparaffins</b>			

<sup>2</sup> Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

<sup>3</sup> Administrative Measure on the Control of Pollution Caused by Electrical and Electronic Products.

<sup>4</sup> H&M Global Product Compliance Department must approve the usage of any flame retardant on any kind of product. Please contact your local Production Office.

Restricted substance	CAS no	Concentration Limit/Requirement	Test method
Short chained chloroparaffins (SCCPs) C10-C13	85535-84-8	Not detected	N-hexane extraction, ultra sound 40°C, 30 min) and analysis by GC-MS using NCI (Negative Chemical Ionization)  Draft EN ISO 18219:2012-12 (modified)
<b>Lead (Pb), Total Amount</b> Accessible parts (in products for children up to 12 years old) and in Paint and Other Similar Surface Coatings	7439-92-1	90 ppm	Metal Products: CPSC-CH-E1001-08.3  Non-Metal Products: CPSC-CH-E1002-08.3  In Paint and Other Similar Surface Coatings: CPSC-CH-E1003-90.1
<b>Nanomaterials</b> "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." <sup>5</sup>	Various	Usage ban <sup>6</sup>	Input control
<b>Nickel (Ni), Extractable Amount</b> In metal products or parts of products in direct and prolonged skin contact	7440-02-0	Maximum release: 0.5 µg/cm <sup>2</sup> /week	EN 1811+A1
<b>Per- and polyfluorinated compounds (PFC/PFAS)</b> All per- and polyfluorinated compounds	Various	Usage ban <sup>6</sup>	Input control

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

<sup>6</sup> The substance(s) must not be used in production and must not be added to the product

Restricted substance	CAS no	Concentration Limit/Requirement	Test method
<b>Polyaromatic hydrocarbons (PAH)<sup>7</sup></b>			AfPS Extraction with toluene followed by GC-MS analysis (reporting limit 0.2 ppm)
Benzo[a]anthracene	56-55-3	<1 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[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	
<b>Phthalates</b>			Extraction with THF/CAN and analysis by HPLC-DAD-MS, confirmation test for DBP using GC-MS (reporting limit 50 ppm)
Butyl benzyl phthalate (BBP)	85-68-7	500 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	
<b>Polyvinylchloride (PVC)</b>			Beilstein's test and infrared spectroscopy (IR) with or without chemical separation
Polyvinylchloride (PVC)	9002-86-2	Not detected	
Polyvinylidenchloride	9002-85-1		
Polychloroprene	9010-98-4		
All other chlorinated polymers	Various		
<b>Bisphenol A in Polycarbonate (PC)</b>	80-05-7		<b>Extractable amount:</b> 3 mg/kg

<sup>7</sup> Only for articles with direct as well as prolonged or short-term repetitive contact with the human skin, made of plastic or rubber.

<b>Restricted substance</b>	<b>CAS no</b>	<b>Concentration Limit/Requirement</b>	<b>Test method</b>
<b>SVHC</b> Check ECHA website for the updated list <sup>8</sup>	Various	1000 ppm in each homogenous part of the product, except if lower limit applies as per other parts of this document.	Combine screening using ICP-MS, GC-MS, and LC-TOF.
<b>Substances defined as hazardous due to intrinsic properties</b> Criteria for hazardous as defined in REACH Article 57 <sup>9</sup>	Various	1000 ppm, except if lower limit applies as per other parts of this document	

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<sup>8</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>9</sup> REACH Regulation (EC) No 1907/2006 <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02006R1907-20150601&from=EN>



## Requirements - Batteries

Restricted substance	CAS no	Concentration Limit/Requirement	Test method
<b>All Batteries must comply with EU Directive 2006/66/EU<sup>10</sup> and 2013/56/EU<sup>11</sup> including its amendments.</b>			
Cadmium (Cd)	7440-43-9	20 ppm	Digestion with aqua regia and determination by ICP/MS
Lead (Pb)	7439-92-1	40 ppm	
Mercury (Hg)	7439-97-6	5 ppm	

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<sup>10</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32006L0066&from=EN>

<sup>11</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:329:0005:0009:EN:PDF>