



# H&M GROUP CHEMICAL RESTRICTIONS 2022

## RESTRICTED SUBSTANCES LIST (RSL)

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### 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*<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 Chemical Restrictions. The examples do not claim to be complete.

		<ul style="list-style-type: none"><li>➤ <b>Tables</b></li><li>➤ <b>Shelves</b></li><li>➤ <b>Cabinets</b></li><li>➤ <b>Stools</b></li><li>➤ <b>Large Mirrors</b></li></ul>
		
		

		<p>Furniture with textile detail</p> <ul style="list-style-type: none"><li>➤ Follow <b>H&amp;M Group Chemical Restrictions Textile Products, Accessories, Footwear, Bags and Belts</b></li><li>➤ Follow <b>H&amp;M Group Chemical Restrictions Toys</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.
Usage ban	The substance must not be used in production and it must not be added to the product. <sup>2</sup>
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

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<sup>2</sup> 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

<b>All Materials</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/ Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Biocidal compounds</b>	Various	Are not allowed to be used without approval by H&M Group	Input control	N/A
<b>Flame retardants<sup>3</sup></b>				
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-(aziridinyl)-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			

<sup>3</sup> 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.

<b>All Materials</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/ Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Lead (Pb), Total Amount</b>	7439-92-1	90 ppm	Coating: CPSC-CH-E1003-09.1 Metal: CPSC-CH-E1001-08.3 Non-metal: CPSC-CH-E1002-08.3	1 ppm
<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>4</sup>	Various	Usage ban <sup>5</sup>	Input control	N/A
<b>Perfluorinated Compounds (PFCs)<sup>6</sup></b>				
Perfluorobutane Sulfonate (PFBS)	29420-49-3	Not detected	For FTOHs – Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS).	10 µg/m <sup>2</sup>
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, 2058-94-8			

<sup>4</sup> European commission recommendation on the definition of nanomaterial (2011/696/EU), Official Journal of the European Union, 20.10.2011.

<sup>5</sup> The substance(s) must not be used in production and must not be added to the product

<sup>6</sup> Impurities of Perfluorinated Compounds (PFCs) in functional finishes are accepted if technically unavoidable in the manufacturing process.



<b>All Materials</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/ Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
Perfluorododecanoic Acid (PFDoA)	307-55-1		Tandem Mass Spectrometer (LC-MS-MS)	
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			
<b>Ammoniumpentadecafluorooctanoate (APFO)</b>	3825-26-1	1000 ppm	Solvent extraction and analysis by LC-MS-MS	100 ppm
<b>Polyvinylchloride (PVC)</b> 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			
<b>Phthalates</b>				
Butyl benzyl phthalate (BBP)	85-68-7	500 ppm		50 ppm

<b>All Materials</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/ Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
Dibutyl phthalate (DBP)	84-74-2	500 ppm	CPSC-CH-C1001-09.3 Analysis by GC-MS	
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		
<b>Chloroparaffins</b>				
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
<b>Organotin Compounds</b>				
Dibutyltin (DBT)	1002-53-5	1 ppm	ISO/TS 16179	0.05 ppm  For High matrix samples: 0.5 ppm
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>All Materials</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/ Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>SVHC</b> Check the ECHA website for the updated Candidate List of Substances of Very High Concern for Authorisation <sup>7</sup>		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	
<b>Substances defined as hazardous due to intrinsic properties</b> Criteria for hazardous as defined in REACH Article 57 <sup>8</sup>		1000 ppm, except if lower limit applies as per other parts of this document.		

### Surface coating, Surface treatment & Adhesives

<b>Surface coating, Surface treatment &amp; Adhesives</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Chromium VI</b>	7440-47-3	Not detected	EN ISO 17075	3 ppm
<b>Formaldehyde</b> 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
<b>Isocyanates</b>				
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			

<sup>7</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>8</sup> REACH Regulation (EC) No 1907/2006 <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02006R1907-20150601&from=EN>

<b>Surface coating, Surface treatment &amp; Adhesives</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Metals, Total Amount</b>				
Cadmium (Cd)	7440-43-9	100 ppm	DIN EN 16711-1/DIN EN 14602	1 ppm
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
<b>Polyaromatic Hydrocarbons (PAH)</b>				
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			
<b>Sum of 18 PAH</b>		<10 ppm		
<b>Triglycidyl isocyanurate (TGIC)</b>	2451-62-9	Powder coating shall not contain hardener.	Self-declaration	
<b>Dimethylfumarate</b>	624-49-7	0.1 ppm  For leather only	ISO 16186	0.1 ppm
<b>VOCs in surface treatment</b>	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	

## Metal

<b>Metal</b>				
<b>Requirement</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Total metal</b>				
Cadmium (Cd)	7440-43-9	100 ppm	DIN EN 16711-1/DIN EN 14602	10 ppm
Mercury (Hg)	7439-97-6	0.5 ppm		0.1 ppm
Lead	7439-92-1	200 ppm		10 ppm
<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	Nickel release by EN 1811+A1 (uncoated surfaces) Nickel release by EN 12472 (coated surfaces)	0.05 µg/cm <sup>2</sup> /week

## Plastic & Rubber including Foam and Silicone

<b>Plastic &amp; Rubber including Foam and Silicone</b>				
<b>Restricted substance</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Bisphenol A</b> - 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
<b>Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs)</b>	several	Usage ban	Self-declaration	-
<b>Chlorophenols</b>				
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

<b>Plastic &amp; Rubber including Foam and Silicone</b>				
<b>Restricted substance</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Dimethylformamide (DMF)</b>	68-12-2	1000 ppm	ISO/TS16189 Ultrasound extraction using ethylacetate followed by GC-MS analysis	10 ppm
<b>Isocyanates</b>				
Diphenylmethane diisocyanate (MDI)	101-68-8	Sum= Not detected	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			
<b>Metals, Total Amount</b>				
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
<b>Polyaromatic Hydrocarbons (PAH)</b>				
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			
<b>Sum of 18 PAH</b>		<10 ppm		
<b>Polychlorinated Biphenyls (PCB)</b>	1336-36-3	The sum < 0.5 ppm		0.1 ppm

<b>Plastic &amp; Rubber including Foam and Silicone</b>				
<b>Restricted substance</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Polychlorinated Triphenyls (PCT)</b>	61788-33-8		Solvent extraction and analysis by GC-MS	0.1 ppm

## Wood, Composite Wood<sup>9</sup>, Cork, Rattan, Bamboo

<b>Wood &amp; Composite Wood</b>				
<b>Restricted substance</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Formaldehyde</b>				
In all wood based products	50-00-0	150 ppm ≤0.124 mg/m <sup>3</sup> air	EN 717-3 EN 717-1 <sup>10</sup>	20 ppm 0.03 mg/m <sup>3</sup>
<b>Lindane</b>	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
<b>Pentachlorophenol and its salt and esters (PCP)</b>	Various, e.g. 87-86-5	0.5 ppm	CEN/TR 14823	0.5 ppm
<b>Arsenic (As) compounds</b>	Various, e.g. 7440-38-2	Not detected	US EPA 3052	10 ppm
<b>Wood preservatives</b>	-	Cannot be used without approval by H&M group <sup>11</sup>	Self declaration	-

<sup>9</sup> Includes furniture made from hardwood, plywood, particleboard, medium density fiberboard, thin medium density fiberboard (thickness ≤ 8mm)

<sup>10</sup> The emissions of free formaldehyde from wood-based panels shall not exceed the E1 emissions limit as described in BS EN 13986.

<sup>11</sup> Please contact your local production office.

## Terracotta, Enamel, Concrete, Soapstone<sup>12</sup>, Marble<sup>12</sup>, Ceramic, Porcelain, Glass & Crystal

<b>Terracotta, Enamel, Concrete, Soapstone, Marble, Ceramic, Porcelain Glass &amp; Crystal</b>				
<b>Restricted substance</b>	<b>CAS no</b>	<b>Limit/Requirement</b>	<b>Test method</b>	<b>Reporting limit</b>
<b>Bisphenol A</b> - Extractable Amount	80-05-7	3 ppm	Extraction with artificial sweat solution (ISO 105 E04), analysis by LC-MS	0.1 ppm
<b>Cadmium (Cd)</b>	7440-43-9	40 ppm	Total digestion, analysis with ICP-MS.	1 ppm
<b>Mercury (Hg)</b>	7439-97-6	2,5 ppm	Total digestion, analysis with ICP-MS. Using HF if silica based pigment is encountered.	1 ppm
<b>Arsenic (As)</b>	7440-38-2	100 ppm	EN 16711-1, analysis by ICP-MS	

<sup>12</sup> It is important to ascertain the mining region as it can contain asbestos depending mining location.