Restricted Substances List April 2023

The following list gives guidelines on hazardous substances and identifies limits which are legal requirements or requirements to be followed in the production of The Very Group (TVG) products

All Suppliers to The Very Group (TVG) must take all reasonable steps to ensure these banned and restricted substances are eliminated or reduced to within acceptable limits.

Testing and quality control processes within the extended supply chain are required activities.

Mandatory testing and the need to present compliance certificates a may be required by The Very Group (TVG) to illustrate compliance.

All due diligence must be recorded and presented when requested by The Very Group (TVG).

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020

REACH Regulation 1907/2006/EC and amendments

REACH is the Regulation for Registration, Evaluation, Authorisation and Restriction of Chemicals. The requirements are valid in the UK and similar requirements apply in all EU Member States. The main purpose of this Regulation is to maintain the highest possible level of protection for human health and for the environment.

Under REACH, the manufacturer and supplier must know the chemical composition of their product and quantities of substances within them to:

- Restrict the use of dangerous substances
- Reduce the use of SVHCs
- Communicate SVHC information throughout the supply chain (i.e., obligation to inform)

REACH involves the Registration, Evaluation, Authorisation, and restriction of Chemicals. Generally, it applies to all individual chemical substances on their own, in preparations or in articles (if the substance is intended to be released during normal and reasonably foreseeable conditions of use from an article).

Articles must:

- Not contain substances restricted under REACH other than the specified limit
- If an article contains more than 0.1% of a Substance of Very High Concern (SVHC) (see section detailed “Duty to inform in accordance with Article 33”) then the next person in the supply chain must be informed. Also, if an article does contain over 0.1% of a SVHC then the amount of

the substance (in each product) calculated over the entire product range, imported per year must be determined. If more than a tonne of any of these SVHCs is imported in a year, then there is an obligation to inform the European Chemicals Agency (ECHA).

Preparations:

- The individual ingredients and their weights in percentage must be identified for each preparation over an entire product range in order to determine if more than a tonne (over the entire product range) of the ingredient is imported (or is produced) per year. If more than a tonne is imported, then registration is required. For example, if your product is considered under REACH as an article + mixture (e.g., pen & ink = article + mixture), the ink of your pens may fall under REACH Registration requirements.

Annex XVII Restrictions

Restrictions in REACH Annex XVII can vary from banning of certain substances and permissible limits for other substances in articles. The below information details some of the key risk substances which may be present in textile products. A more detailed summary of chemicals is provided in the RSL (Restricted Substance List).

Nonyl Phenyl Ethoxylate (NPEO)

Entry 46, 46a

NPEO is widely used in textile processing. It is harmful to the environment and has been restricted in textile products which are intended to be washed

The restriction in washable items is 100 mg/kg.

Total Cadmium

Entry 23

Annex XVII restricts cadmium levels in paints, paint on painted articles and metal parts of jewellery, whether accessible or not.

The restriction for polymeric and metal parts of jewellery items is 100 mg/kg

Phthalates

Entry 51

No articles shall be placed on the market that contain more than 1000 mg/kg of DIBP either on its own or in combination of any of: DEHP, DBP or BBP.

Entry 52

Phthalate restrictions apply to plasticised materials in toys and childcare articles

≤ 1000 mg/kg (sum of DIDP, DINP and DNOP) for plasticised materials in toys and childcare articles which can be placed in the mouth by children

Entry 72

There are further restrictions on phthalates in clothing and similar articles in the CMR restriction of Entry 72

Azo Dyes

Entry 43

This restriction applies to textile and leather articles which may come into direct and prolonged contact with the human skin or oral cavity. Materials shall not contain azo dyestuffs or azo pigments which can undergo a breakdown under chemically reducing conditions at a level of greater than of 30 mg/kg of any of the restricted aromatic amines.

Nickel release

Entry 23

The restriction applies to metal components which are to be in direct and prolonged contact with the skin

Post assemblies that are intended to be inserted into a pierced part of the human body, must have a nickel release of less than 0.2µg/cm2/week

Jewellery items which come into direct and prolonged contact with the skin must have a nickel release not exceeding 0.5µg/cm2/week.

Items which have a non-nickel coating must not exceed 0.5µg/cm2/week for a period of at least two years of normal use of the item.

Total Lead

Entry 63

Lead is well known toxin which is implicated in the development of brain function. The REACH restriction is 500 mg/kg for items which are small enough to be placed in the mouth of a child and, also in jewellery items

Chromium VI (Hexavalent chromium)

Entry 47

Chromium VI is known to be a carcinogen and is corrosive to the skin sometimes causing skin ulcers. It is associated with the tanning of leather hides. Leather articles or leather parts of articles coming into contact with the skin shall not be placed on the market where they contain chromium VI in concentrations equal to or greater than 3 mg/kg

Formaldehyde

CMR restriction – Entry 72

Free and hydrolysed formaldehyde is restricted to a limit of 75 mg/kg for items with skin contact

Flame retardants (TRIS, TEPA, PBB) in textiles

TRIS, TEPA and PBB additives have been used to reduce the flammability of textile articles, such as garments, undergarments, and linen, intended to come into contact with the skin. They are carcinogens. The use of the flame retardants TRIS, TEPA and PBB in textile articles intended for skin contact is prohibited under REACH.

Dimethyl fumarate

Entry 61

Dimethyl fumarate is most likely to be found in high-risk materials such as textiles, foam, and wood (usually natural products transported in humid environments). A product or part of the product containing DMFu in a concentration of greater than 0.1 mg/kg is prohibited from being placed or made available on the market.

CMRs In Textiles

Entry 72

This restriction applies to 10 classes of substances which may be present in textiles and are considered to be harmful as CMR substances (carcinogens, mutagens and toxic to reproduction)

The substance classes are:

- Metals
- Aryl amines salts
- Carcinogenic dyestuffs
- Formaldehyde
- Benzene
- Quinoline
- Chlorinated aromatic hydrocarbons
- Phthalates
- Solvents (DMAC, DMFa, NMP)
- Polyaromatic hydrocarbons (PAHs)

PFOA in articles and latex printing inks

PFOA has been used to provide water resistant properties to textiles. They are in articles in a concentration equal to or above 25 ppb (0.025 mg/kg) of PFOA including its salts or 1 000 ppb (1 mg/kg) of one or a combination of PFOA-related substances

PFOS is restricted under the **Persistent Organic Pollutants regulations 2019/1021 (EU) and amendments**

Restricted Substances List April 2023

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CAS No.	Substance	Limits Component Materials in Finished Product	Potential Uses & Additional Information	Suitable Test Method Sample Preparation & Measurement	Reporting Limit Limits above which test results should be reported	Scope
1. Alkylphenols (APs) + Alkylphenol Ethoxylates (APEOs) + including all isomers						
Various	Nonylphenol ethoxylates (NPEOs)	Total: 100 mg/kg	NPEOs are used as wetting agents and emulsifiers in silk, linen, cotton, and leather Restricted in Washable Textile products	EN ISO 18254-1:2016 (textile)	Total of NPEO & OPEO: 20 mg/kg	- Textile materials
2. Azo-amines and Arylamine Salts						
92-67-1	4-Aminobiphenyl	20 mg/kg	Azo dyes and pigments are colorants that incorporate one or several azo groups (-N=N-) bound with aromatic compounds. Thousands of azo dyes exist, but only those which degrade to form the listed cleaved amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing textiles.	All materials except Leather: EN ISO 14362-1:2017 Leather: EN ISO 17234-1:2015 p-Aminoazobenzene: All materials except Leather: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011	5 mg/kg	- Textile materials - Leather - Synthetic leather
92-87-5	Benzidine					
95-69-2	4-Chloro-o-toluidine					
91-59-8	2-Naphthylamine					
97-56-3	o-Aminoazotoluene					
99-55-8	2-Amino-4-nitrotoluene					
106-47-8	p-Chloraniline					
615-05-4	2,4-Diaminoanisole					
101-77-9	4,4'-Diaminodiphenylmethane					
91-94-1	3,3'-Dichlorobenzidine					
119-90-4	3,3'-Dimethoxybenzidine					
119-93-7	3,3'-Dimethylbenzidine					
838-88-0	3,3'-dimethyl-4,4'-diaminodiphenylmethane					
120-71-8	p-Cresidine					
101-14-4	4,4'-Methylen-bis(2-chloraniline)					
101-80-4	4,4'-Oxydianiline					
139-65-1	4,4'-Thiodianiline					
95-53-4	o-Toluidine					
95-80-7	2,4-Toluenediamine					
137-17-7	2,4,5-Trimethylaniline					
95-68-1	2,4 Xylidine					
87-62-7	2,6 Xylidine					
90-04-0	2-Methoxyaniline (= o-Anisidine)					

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60-09-3	p-Aminoazobenzene					
3165-93-3	4-Chloro-o-toluidinium chloride					
553-00-4	2-Naphthylammoniumacetate					
39156-41-7	4-Methoxy-m-phenylene diammonium sulphate					
21436-97-5	2,4,5-Trimethylaniline hydrochloride					
3. Chlorinated Organic Carriers/Chlorotolunen						
5216-25-1	p-Chlorobenzotrichloride	<1 mg/kg	Chlorotoluenes (Chlorinated Aromatic Hydrocarbons) can be used as carriers in the dyeing process of polyester or wool/polyester fibres. They can also be used as solvents.	EN 17137:2018	0.2 mg/kg	- Leather
98-07-7	Benzotrichloride					
100-44-7	Benzyl Chloride					
4. Chlorinated Parafins						
85535-84-8	Short-chain Chlorinated Paraffins (SCCPs) (C10-C13)	1000 mg/kg	May be used as softeners, flame retardants, or fat-liquoring agents in leather production; also, as a plasticizer in polymer production.	ISO 18219:2021 Leather ISO 22818:2021 Textiles and all other materials	100 mg/kg	- Leather - Synthetic leather - Prints
5. Chlorinated Phenols						
87-86-5	Pentachlorophenol (PCP)	0.5 mg/kg	Pentachlorophenol (PCP), Tetrachlorophenol (TeCP), and Trichlorophenols (TriCP) are sometimes used to prevent mould and kill insects when growing cotton and when storing/transporting fabrics.	DIN 50009:2021	0.5 mg/kg	- Leather - Textile materials
6. Dimethylfumarate (DMFu)						
624-49-7	Dimethylfumarate (DMFu)	0.1 mg/kg	DMFu is an anti-mould agent that may be used in sachets in packaging to prevent the build-up of mould, especially during shipping.	ISO 16186:2021	0.05 mg/kg	- PU

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7. Dyes (Forbidden and Disperse)						
2475-45-8	C.I. Disperse Blue 1	50 mg/kg	Disperse dyes are used in synthetic fibre (e.g., polyester, acetate, polyamide). Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles.	DIN 54231:2022		- Textile materials
569-61-9	C.I. Basic Red 9					
548-62-9	C.I. Basic Violet 3					
8. Dyes – Navy Blue						
118685-33-9	Component 1: C39H23ClCrN7O12S.2Na	50 mg/kg	Navy blue colorants are regulated and prohibited from use for dyeing of textiles. Index 611-070-00-2	DIN 54231:2022	15 mg/kg	- Textile materials
Not allocated	Component 2: C46H30CrN10O20S2.3Na					
9. Flame Retardants						
5412-25-9	Bis(2,3-dibromopropyl) phosphate (BDBPP)	10 mg/kg each	With very limited exceptions, flame retardant substances, including the entire class of organ halogen flame retardants, should no longer be applied to materials during production.	EN ISO 17881-1:2016	5 mg/kg each	- Textile materials - Plastics
115-96-8	Tris(2- chloroethyl)phosphate (TCEP)					
545-55-1	Tris(aziridinyl)-phosphine oxide (TEPA)					
126-72-7	Tris-(2,3-dibromopropyl)- phosphate (TRIS)					
25155-23-1	Trixyxlphosphate					
36483-60-0	Hexabromodiphenyl ether (Hexa BDE)					
3296-90-0	2,2-bis(bromomethyl)-1,3- propanediol (BBMP)					
3194-55-6	Hexabromocyclododecane					
59536-65-1	Polybromobiphenyls (PBB)					
79-94-7	Tetrabromobisphenol A (TBBP A)					
40088-47-9	Tetrabromodiphenyl Ether (Tetra BDE)					
1163-19-5	Decabromodiphenyl Ether					
32536-52-0	Octabromodiphenyl Ether					
32534-81-9	Pentabromodiphenyl Ether					
68928-80-3	Heptabromodiphenyl Ether (Hepta BDE)					

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10. Formaldehyde						
50-00-0	Formaldehyde	<75 ppm	Formaldehyde resins are commonly used to suppress wrinkling and shrinking or for pleating	BS EN ISO 14184-1:2011	16 ppm	- Textile materials
11. Metals - Extractable						
7440-38-2	Arsenic	1.0 mg/kg		Textiles: BS EN 16711- 2:2015		- Textile materials - Footwear
7440-43-9	Cadmium (Cd) – Non-Jewellery	1.0 mg/kg				
18540-29-9	Chromium (VI)	1.0 mg/kg				
7439-92-1	Lead (Pb) – Non-Jewellery	1.0 mg/kg				
12. Metals - Total						
7440-43-9	Cadmium (Cd) – Non-Jewellery	100 mg/kg		EN 16711-1: Total digestion method and analysis with ICP		- All articles
7439-92-1	Lead (Pb) – Non-Jewellery	Substrate - 100 mg/kg Surface coatings - 90 mg/ kg				
13. Metals - Other						
18540-29-9	Chromium (VI)	3 mg/kg		ISO 17075-1: 2017 with ageing (80°C for 24 hours at less than 5% RH)		- Leather (after aging)
7440-02-0	Nickel (Ni)	0.5 µg/cm²/week (Prolong skin-contact); 0.2 µg/cm²/week (Piercing item)	Nickel and its compounds can be used for plating alloys and improving corrosion-resistance and hardness of alloys. They can also occur as impurities in pigments and alloys.	BS EN 1811:2011+A1:2015 BS EN 12472:2020		- Metallic parts - Metallic post assemblies - Jewellery

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14. Organotin Compounds						
various	Tributyl tin (TBT)+compounds	1000 mg/kg	Prints, adhesives, PU, silicon (zipper pullers) lacquers	ISO/TS 16179:2012		- PU - Plastic accessories
various	Dibutyl tin (DBT)					
various	Dioctyl tin (DOT) + compounds					
various	Triphenyltin (TPhT) compounds					
15. Per and Polyfluoroalkyl Substances (PFAS)						
various	Perfluoro octane sulphonate (PFOS) and related substances	1000 ppb	PFAS may be used in commercial water-, oil-, and stain-repellent agents as well as in breathable membranes that remove moisture, e.g., PTFE.	EN ISO 23702-1 or EN17681-1:2022 & 17681-2:2022		- Textile materials - Leather
various	Perfluoro octanoic acid (PFOA) and related substances	25 ppb				
various	C9-C14 Perfluorocarboxylic acids (PFCAs) and their salts	25 ppb				
various	C9-C14 PFCA-related substances	260 ppb				
16. Phthalates						
28553-12-0/68515-48-0	Diisononyl Phthalate (DINP)	500 mg/kg each total: 1000 mg/kg	Phthalates are most commonly used as plasticisers in PVC and can be found at very high levels (up to 35%) in plastics, coatings, mock leather, and pigment prints (plastisol). May also be found in glues.	Sample preparation for all materials: CPSC-CH-C1001-09.4 Measurement: Textiles: GC/MS, EN ISO 14389:2014 (7.1 Calculation based on weight of print only; 7.2 Calculation based on weight of print and textile if print cannot be removed). All materials except textiles: GC/MS	50 mg/kg each	- Textile materials - Leather - Plastics - Synthetic leather
117-84-0	Di-n-octyl Phthalate (DNOP)					
117-81-7	Bis-(2-ethylhexyl) Phthalate (DEHP)					
26761-40-0/68515-49-1	Diisodecyl Phthalate (DIDP)					
85-68-7	Benzylbutyl Phthalate (BBP)					
84-74-2	Dibutyl Phthalate (DBP)					
84-69-5	Diisobutyl phthalate (DIBP)					
84-75-3	Di-n-Hexylphthalate (DnHP)					
84-66-2	Diethylphthalate (DEP)					
131-11-3	Dimethylphthalate (DMP)					
131-18-0	Di-n-pentylphthalate (DnPP)					
84-61-7	Di-cyclohexylphthalate (DCHP)					
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7 rich (DIHP)					
117-82-8	Bis(2-methoxyethyl) phthalate (DMEP)					
605-50-5	Diisopentyl phthalate (DIPP)					
131-16-8	Dipropyl phthalate (DPRP)					

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27554-26-3	Diisooctyl phthalate (DIOP)					
68515-50-4	Diisohexyl phthalate					
17. Polycyclic Aromatic Hydrocarbons (PAHs)						
83-32-9	Acenaphthene (ANA)	each PAH: 1.0 mg/kg	PAHs are carcinogens. PAHs can be found in black pigments and various oils that can be added to plastics and rubbers and coatings. Rubbers/neoprene main concern, black colour is high risk	AfPS GS 2019		- Textile materials - Leather - Plastics - Rubber - Synthetic leather
208-96-8	Acenaphthylene (ANY)					
120-12-7	Anthracene (ANT)					
191-24-2	Benzo[g,h,i]perylene (BPE)					
86-73-7	Fluorene (FLU)					
206-44-0	Fluoranthene (FLT)					
193-39-5	Indeno[1,2,3-cd]pyrene (IPY)					
91-20-3	Naphthalene (NAP)					
85-01-8	Phenanthrene (PHE)					
129-00-0	Pyrene (PYR)					
56-55-3	Benzo[a]anthracene (BaA)					
50-32-8	Benzo[a]pyrene (BaP)					
205-99-2	Benzo[b]fluoranthene (BbF)					
192-97-2	Benzo[e]pyrene (BeP)					
205-82-3	Benzo[j]fluoranthene (BjF)					
207-08-9	Benzo[k]fluoranthene (BkF)					
218-01-9	Chrysene (CHR)					
53-70-3	Dibenzo[a,h]anthracene (DBA)					
18. Solvents and Residuals						
68-12-2	Dimethylformamide (DMFa)	3000 mg/kg	Solvent used in plastics, rubber, and polyurethane (PU) coating. Water based PU does not contain DMFa and is therefore preferable.	Textiles: EN 17131:2019 All other materials: ISO 16189:2021	50 mg/kg each	- PU
127-19-5	Dimethylacetamide (DMAC)		Solvent used in the production of elastane fibers and sometimes as substitute for DMFa.			

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872-50-4	N-Methyl-2-pyrrolidone (NMP)	3000 mg/kg	Industrial solvent used in production of water-based polyurethanes and other polymeric materials. May also be used as a surface treatment for textiles, resins, and metal-coated plastics, or as a paint stripper.	Textiles: EN 17131:2019 All other materials: ISO 16189:2021	50 mg/kg each	- PU
127-19-5	Dimethylacetamide (DMAC)		Solvent used in the production of elastane fibers and sometimes as substitute for DMFa.			
19. Volatile Organic Compounds (VOCs)						
71-43-2	Benzene	5 mg/kg	PU and items with glues/adhesives.	GC/MS headspace 45 minutes at 120° C 1000 mg/kg (sum)		- PU
108-88-3	Toluene					
1330-20-7	Xylenes (meta-, ortho-, para-)					
108-38-3						
95-47-6						
106-42-3						
20. Other Substances						
91-22-5	Quinoline	50 mg/kg	Used in the manufacture of dyes	DIN 54231:2022		- Textile material