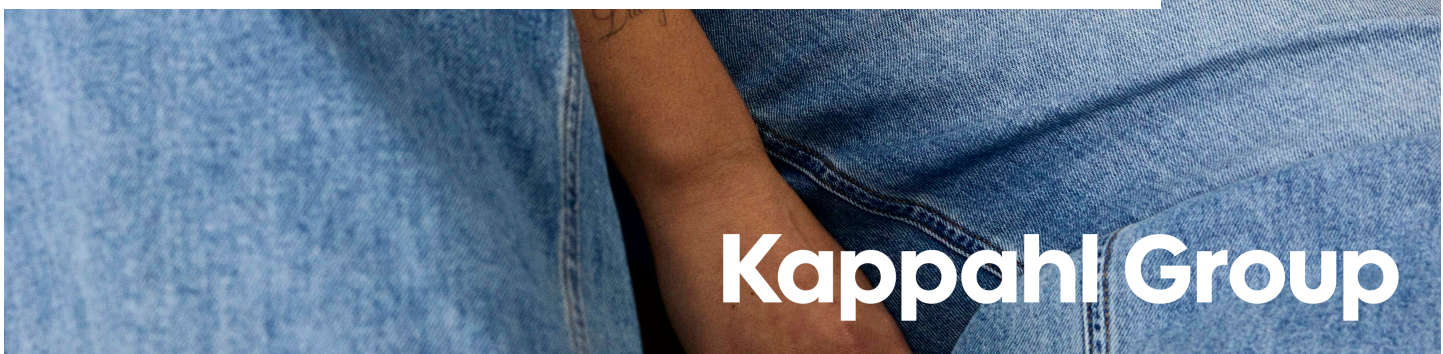


Version 9
2026



Chemical Restrictions

MRSL and RSL



Kappahl Group

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INTRODUCTION

Kappahl Group's chemical requirements stated in this document apply to all Kappahl Group's orders, including fabric, trims, leather and accessories.

Chemical Restrictions – Production

Kappahl Group's supply chains, manufacturing must comply with Zero Discharge of Hazardous Chemicals Manufacturing Restricted Substances List found at <https://mrsl.roadmaptozero.com/>

Chemical Restrictions – Products

All products must comply with AFIRM's Restricted Substances List found at <https://afirm-group.com/afirm-rsl/>
If a specific substance is stated both in the AFIRM's RSL and Kappahl Group's RSL, Kappahl Group's requirements must be followed.

General

In addition to the chemical requirements, Kappahl Group does not accept any of its products to contain substances which are restricted or prohibited as a result of national or international regulations, or of environmental and/or health concerns.

Supplier is responsible that the latest edition of chemical restrictions are followed and to inform all their subcontractors about the content of the requirements and to assure compliance.

All suppliers must keep record of the chemical substances used in production. The list must include name of the chemical product and Material Safety Data Sheet (MSDS). Kappahl Group reserve the rights to ask for additional documentation, showing the chemical substances that been used during production.

Tests and inspections will be carried out at random. If an order fails according to the requirements in this document Kappahl Group reserve the right to cancel the order.

Additional requirements GOTS certified products

In addition to Kappahl Group's Chemical Restrictions, GOTS-certified products shall also comply with requirements in the latest version of Global Organic Textile Standard (GOTS), in particular the requirements specified in Table 5.2.7 (Limit values for residues in GOTS Goods) and 5.2.8 (Limit values for residues in additional fiber materials and accessories). Where Kappahl Group Chemical Restrictions and GOTS-tables list requirements for the same substances, the strictest requirement shall always take precedence.

Recycled Materials Products manufactured with recycled materials (fibers, polymers, down) have to fulfil the requirements defined by Kappahl Group RSL. Vendors and suppliers have to set in place and agree with Kappahl Group on an appropriate testing program to guarantee compliance on all production and batches of recycled materials.

1.1 General requirements and legislations

REACH	Registration, Evaluation, Authorization and restrictions of Chemicals
SVHC	Substance of Very High Concern . Kappahl products shall not contain more than 1000 ppm of a substance on the SVHC-list. If a substance is included in Kappahl's RSL and on the SVHC-list, Kappahl's requirement must be followed.
POP, PBT, vPvB, CMR or ED	Substances defined as persistent organic pollutants POP , persistent, bioaccumulative and toxic (PBT), very persistent and very bioaccumulative (vPvB), carcinogenic, mutagenic and toxic for reproduction (CMR), endocrine disruptors (ED) or equivalent concern cannot exceed 1000 mg/kg in a product. If a specific substance is stated both in the RSL and as POP, PBT, vPvB, CMR or ED, Kappahl's requirements must be followed.
Antibacterial treatments	Usage ban of all Biocidal agents

EU Toy Safety Directive 2009/48/EC (Transitioning to Toy Safety Regulation (EU) 2025/2509) & UK The Toys (Safety) Regulations SI 2011:1881

All toys must comply with chemical requirements and be tested according to the latest valid edition of EN 71 Toy standard. Substances that are classified as carcinogenic, mutagenic or toxic for reproduction (CMR) of category 1A, 1B or 2 shall not be used in toys or in components of toys.

1.2 Packaging

All packaging material such as paper cardboard, plastic bags, tags, labels, plastic sleeves etc. must be in accordance with the **Packaging Directive 94/62/EC**, the **French AGECE law against waste and for the circular economy, LOI n° 2020-105** and meet the chemical restrictions in AFIRM Packaging Restricted Substances List. Packages for cosmetics must be according to the **Cosmetic Regulation EC 1223/2009**.

1.3 Explanation Table

CAS No	Chemical Abstracts Service number.
1 ppm	1 parts per million = 1 mg/kg = 0,0001%
1 ppb	1 parts per million = 1000 part per billion
Detection Limit	The lowest value of a substance to be found during testing with a specific test method.
Not Detected	A substance with the requirement "Not Detected" cannot be found above detection limit.
Children <3 yrs	Up to and including size 98. If double size including 98/104.

1.4 Test method

The latest edition of every test method must be used if no other information has been given.

1.5 Battery

Any **battery** that is classified as hazardous, according to the "Swedish Battery Ordinance" 1997:645 and Regulation (EU) 2023/1542 is not acceptable. Heavy metals such as; Hg, Cd and Pb are restricted as follows:

- Mercury, Hg: 0,0005 %
- Cadmium, Cd: 0,002 %
- Lead, Pb: 0,004 %

Items that contain batteries must be marked with this symbol.



Batteries shall be removable from the product at end if not before end of life, so that they can be sorted as battery waste. Instructions on how batteries are to be removed shall be included with the product, but where necessary may refer to battery removal being performed by a professional.

2. ADDITIONAL REQUIREMENTS

SUBSTANCES AND/OR MATERIALS	CAS NO	REQUIREMENTS/LIMIT	TEST METHODS
2.1 Biocides			
Usage ban of all Biocidal agents. The following examples are provided for reference.			
Butyl 4-hydroxybenzoate	94-26-8	Any biocide finishing is not allowed Not Detected, detection limit 0,5 mg/kg	For biocidal substances restricted in ZDHC MRSL and AFIRM RSL: test methods for those are specified there.
Ethyltrirol	107534-96-3		
1,2-benzisothiazol 3(2H)one	2634-33-5		
Propiconazole	60207-90-1		
2-bromo-2-nitropropane-1,3 diol	52-51-7		
2-octyl-2H-isothiazol-3-one	26530-20-1		
Silver zeolite	130328-18-6		
Silver zinc zeolite	130328-20-0		
Carbendazim	10605-21-7		
Chitosan	9012-76-4		
Chlorocresol	59-50-7		
Cu-HDO (Bis-(N-cyclohexyldiazeniumdioxy) –copper)	312600-89-8		
Disodium tetraborate, anhydrous	1330-43-4, 12179-04-3, 1303-96-4		
Guanidine, N, N'''-1,6-hexanediylbis[N'-cyano-, polymer with 1,6-hexanediamine, hydrochloride (PHMB 1600;1.8)	27083-27-8, 32289-58-0		
Glutaral	111-30-8		
Isobutyl 4-hydroxybenzoate	4247-02-3		
Permethrin	52645-53-1		
Silver chloride	7783-90-6		
Silver sodium hydrogen zirconium phosphate	422-570-3		
Silver-zink-aluminium-boronphosphate glass	398477-47-9		
Sodium 2-biphenylate	132-27-4		
Sodium methyldithiocarbamat	137-42-8		
Sodium perborate, perboric acid, sodium salt	234-390-0		
Sodium peroxometaborate	7632-04-04		
Sulphuryl difluoride	2699-79-8		
TCMTB	21564-17-0		
Tetraboron disodium heptaoxid, hydrate	12267-73-1		
Thiabendazole	148-79-8		
Thiram	137-26-8		
Triclosan	3380-34-5		
Triclocarban	101-20-2		
Zincpyrithion	13463-41-7		
Prallethrin	23031-36-9		

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2.2 Bisphenols	CAS NO	REQUIREMENTS/LIMIT	TEST METHODS
Bisphenol A (BPA)	80-05-7	All materials 1 mg/kg total content, detection limit 1 mg/kg	Leather: EN ISO 11936:2023 All materials: Extraction: 1 g sample/20 ml THF, sonication for 60 minutes at 60° C, analysis with LC/MS
2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	All materials 10 mg/kg (individual & sum), detection limit 1 mg/kg	
Bisphenol B; (4,4'-(1-methylpropylidene)bisphenol)	77-40-7		
4,4'-sulphonyldiphenol (bisphenol S; BPS)	80-09-1		
Bisphenol F (BPF)	620-92-8		
Bisphenol AF (BPAF)	1478-61-1		

2.3 N,N-Dimethylformamide, DMFa			
N,N-Dimethylformamide, DMFa	68-12-2	General PU: 500 mg/kg Waterborne PU and print with adjacent fabric: 30 mg/kg	Textiles: EN 17131-1 All other materials: ISO 16189:2021

2.4 Brominated & Organophosphorus Substances (Formerly Flame Retardants)	General usage ban for chemicals used for this function		
Flame retardants listed in AFIRM RSL	Various	Not Detected, Detection limit 5 mg/kg for each Boric acid, Detection Limit 50 mg/kg	According to method stated in AFIRM RSL
Bis(2-ethylhexyl) tetrabromophthalate (TBPH) covering any of the individual isomers and/or combinations thereof, 1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene]BTBPE	37853-59-1		
Antimony(III) oxide	1309-64-4		
Dimethyl methylphosphonate (DMMP)	756-79-6		
Hexabromobiphenyl	36355-01-8		
Diphenyl tolyl phosphate	26444-49-5		
Orthoboric acid, sodium salt	13840-56-7		
Phosponium tetrakis(hydroxymethyl)-chloride	124-64-1		
Phosponium tetrakis(hydroxymethyl)-sulphate (2:1)salt	55566-30-8		
Phosphoric acid, (1,1-dimethylethyl)phenyl diphenylester	56803-37-3		
Phosphoric acid, 2,2-bis(chloromethyl)-1,3propanediyl tetrakis(2chloroethyl)ester	38051-10-4		
Phenol, isopropylated, phosphate (3:1)	68937-41-7		
Triallyl phosphate	1623-19-4		
Tricresyl phosphate (TCP)	1330-78-5		
Tri-o-cresyl phosphate	78-30-8		
Triphenyl phosphate (TPhP)	115-86-6		

2.5 Polyvinylchloride (PVC) General material ban	CAS NO	REQUIREMENTS/LIMIT	TEST METHODS
Polyvinylchloride (PVC)	9002-86-2	Banned	Beilstein (In case positive flame test; perform FTIR)
Polyvinylidenchloride	9002-85-1		

2.6 Per and Polyfluorinated compounds – PFAS General usage ban			
Per- and Polyfluoroalkyl Substances (PFAS) and Appendix B in AFIRM RSL	Various	Not detected according to AFIRM reporting limit	Product testing according to methods specified in AFIRM RSL
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid (HFPO-DA), its salts and its acyl halide:	Various	Not Detected, Limit of Quantification ≤ 10 ppb	
Perfluoroheptane sulfonate (PFHpS)	375-92-8		
Perfluorodecane sulfonate (PFDS)	335-77-3		
Perfluorobutanoic acid (PFBA) and its salts	Various including 375-22-4		
Perfluoropentanoic acid (PFPA) and its salts	Various including 2706-90-3		
Perfluoroheptanoic acid (PFHpA) and its salts	Various including 375-85-9		
4:2 fluorotelomer sulfonate (4:2 FTS)	757124-72-4		
6:2 fluorotelomer sulfonate (6:2 FTS)	27619-97-2		
Perfluorobutane sulfonate (PFBS)	375-73-5		
1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)	17527-29-6	Not Detected, Limit of Quantification ≤ 100 ppb	
1H,1H,2H,2H-Perfluorohexanol (4:2 FTOH)	2043-47-2	Not Detected, Limit of Quantification ≤ 400 ppb	
1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)	647-42-7	Not Detected, Limit of Quantification ≤ 100 ppb	

2.7 Self-adhesive Products for skin contact

SUBSTANCES AND/OR MATERIALS	CAS NO	REQUIREMENTS/LIMIT	TEST METHODS
Self-adhesive products for skin contact including, but not limited to: body tape, self-adhesive bra, nipple covers.			
Adhesive	Various	All compliance documents must be globally approved at the product development stage, minimum once per season.	<p>In addition to regular chemical compliance assurance (risk assessment and related testing), the following documents are required.</p> <p>1. Full Material Declaration (FMD) for chemical products for the adhesive.</p> <p>2. Third-party Toxicological Risk Assessment (TRA) for the adhesive, of the following endpoints according to Regulation (EC) No 1272/2008 (CLP):</p> <ul style="list-style-type: none"> -Corrosivity -Skin irritation -Eye irritation -Skin sensitization -Oral toxicity -Inhalation toxicity <p>Considering:</p> <ul style="list-style-type: none"> -Ingredient toxicology profile -Potential ingredient interaction -Consumer exposure scenario

2.8 Revision History Table

This table records the changes made to the Chemical Restrictions document.
The revision history begins with version 9; changes made in earlier versions (1-8) are not included.

Revision History			
VERSION	DATE	PAGE REFERENCE	CHANGES / COMMENTS
9	January 2026	3	European Toy Safety Directive updated: Directive 2009/48/EC (transitioning to Toy Safety Regulation (EU) 2025/2509) & added UK The Toys (Safety) Regulations SI 2011:1881.
		4	Added "Prallethrin" (CAS No. 23031-36-9) as an example substance under the Biocides category.
		5	Updated the applicable standard to EN 17131-1, replacing EN 17131:2019, for the detection and quantification of DMFa, DMAC, NMP, and NEP in textiles.
		6	Revised PFAS Limits of Quantification (LOQs) to align with the new EN 17681-1:2025 method and standardized the measurement unit from " $\mu\text{g}/\text{m}^2$ " to "ppb".