

Version 7
2023



Chemical Restrictions

MRSL and RSL



Kappahl

TABLE OF CONTENTS

1.1 General requirements and legislations	2
1.2 Packaging	2
1.3 Explanation Table.....	3
1.4 Test method	3
1.5 Battery.....	3
2. ADDITIONAL REQUIREMENTS.....	4
2.1 Biocides Usage ban of all Biocidal agents	4
2.2 Bisphenols	5
2.4 N,N-Dimethylformamide, DMFa	5
2.5 Flame retardants.....	5
2.6 Polyvinylchloride (PVC)	6
2.7 Per and Polyfluorinated compounds – PFAS.....	6

INTRODUCTION

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

Chemical Restrictions – Production

Kappahl 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/>

In addition to the chemical requirements, Kappahl 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 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 reserve the right to cancel the order.

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.
PBT, vPvB, CMR or ED	Substances defined as 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 PBT, vPvB, CMR or ED, Kappahl's requirements must be followed.
Antibacterial treatments	Usage ban of all Biocidal agents
Toy Safety Directive 2009/48/EC	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** 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 Directive 2006/66/EC 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	LIMIT	TEST METHODS
2.1 Biocides			
Usage ban of all Biocidal agents			
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.
Ethyltrianol	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		

2.2 Bisphenols			
Bisphenol A (BPA)	80-05-7	Not Detected, detection limit 1 mg/kg	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		
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		

2.4 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 17131:2019 All other materials: ISO 16189:2021

2.5 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-diylbisoxo]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		
Phosphonium tetrakis (hydroxymethyl)-chloride	124-64-1		
Phosphonium 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		

2.6 Polyvinylchloride (PVC)			
General material ban			
Polyvinylchloride (PVC)	9002-86-2	Banned	Beilstein (In case positive flame test; perform FTIR)
Polyvinylidenchloride	9002-85-1		

2.7 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, detection limit 1 µg/m ² for each	
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		
1H,1H,2H,2H-Perfluorohexanol (4:2 FTOH)	2043-47-2		
1H,1H,2H,2H-Perfluoro-1-octanol (6:2 FTOH)	647-42-7		