RESTRICTED SUBSTANCES LIST

Nakdcom One World AB

April 2024

Version IV

TABLE OF CONTENTS

1 INTRODUCTION

At NA-KD (Nakdcom One World AB), we aim to maintain the highest ethical standards and business conduct, and we want our customers to be aware of the products we distribute and that the procurements are fairly and ethically manufactured. The NA-KD Restricted Substances List (RSL) elaborates on these standards and details the minimum requirements and NA-KD monitoring procedures regarding the use of chemicals in NA-KD products.

A Joint Effort

The chemical requirements stated in this RSL apply for all NA-KD products and materials, including fabrics, garments, trims, accessories, footwear, beauty products, hard goods, and packaging, and all NA-KD orders must comply with the minimum standards. NA-KD does not accept any of its products to contain restricted or prohibited substances, in accordance with local and international regulations.

At NA-KD, we believe in cooperation with our suppliers and other business partners to achieve sustainable solutions, and in meeting our standards in terms of environmental sustainability, working conditions and consumer safety. This entails high expectations on our suppliers to comply with the standard and requires a continuous and functioning communication between NA-KD and our suppliers, and between our suppliers and their subcontractors.

Suppliers are responsible for assuring compliance with the NA-KD RSL, and for ensuring that their subcontractors, including accessory suppliers, dyeing mills, printing mills, tanneries, chemical suppliers, and other relevant business partners, are informed of the RSL requirements and have access to latest edition of the RSL.

Suppliers must also keep record of the chemical substances used in the manufacturing of NA-KD products and be able to declare that all products and materials comply with the restrictions detailed in this document. Documentation to support the above must be provided by the supplier, including lists detailing all chemical products used and Material Safety Data Sheets (MSDS).

Information provided in this document is valid as of April 2024. Actualisations and modifications will be notified and will be included in this list as of such date. For any questions or further information, please contact quality@na-kd.com.

2 MONITORING AND ENFORCEMENT

The NA-KD monitoring and enforcement procedures consist of several components, which are detailed below.

Monitoring Procedures

NA-KD will carry out due diligence testing to verify compliance with the NA-KD Restricted Substances List.

- NA-KD will on a regular basis ask the supplier to submit a test report, at the supplier's expense, to verify that the restricted chemicals and substances are followed.
- NA-KD can also, on a random basis, make a chemical test without informing the supplier. Cost for this test will be on NA-KD expense as long as test results are within NA-KD requirements.

Furthermore, NA-KD requires all suppliers, manufacturers, and other business partners to provide complete and accurate information on the use of chemical substances for all products and materials. Suppliers must also provide relevant and verifiable documentation upon request, to support that all products comply with the NA-KD RSL.

NA-KD also reserves the right to make unannounced visits to all units producing goods or services for the company, at any time. Likewise, the company reserves the right to appoint an independent third party of its choice to conduct audits to evaluate the compliance with the RSL. During inspections and audits, NA-KD requires unrestricted access to all areas of the premises, to all documents and to all workers for conducting interviews. NA-KD also demands the right to provide workers with the company’s contact details.

When NA-KD request a test from external laboratory, one of the below appointed laboratories should be used:

- Bureau Veritas
- Eurofins
- Intertek
- SGS
- TUV

Corrective Action

Strict compliance with the NA-KD RSL requirements is a compulsory condition for all orders placed by NA-KD. Should an order fail to comply with the requirements in this document, or should any inspection or audit detect violations of the RSL, NA-KD reserves the right to cancel the order and take additional corrective action if deemed necessary.

Any supply of non-compliant goods is a violation of the contractual agreement between NA-KD and the supplier and constitutes a material defect. NA-KD therefore reserves the right to claim compensation for any damages or financial losses we may suffer due to non-compliance. Suppliers should also note that they will be charged with any testing costs associated with such non-compliances.

Generally, the supplier will be given the opportunity to propose and implement a corrective action plan. NA-KD shall in such cases follow up the implementation of the plan and verify that violations have been remedied. A supplier failing to undertake sustainable improvements within the stipulated time frame would seriously damage its relationship with the company.

3 INTERNATIONAL AND NATIONAL REGULATIONS

The NA-KD RSL conforms to the strictest legal requirements worldwide, and is based mainly on EU regulations and directives, but also on national laws. Should the different legislations be similar in their meaning, the highest standard should always be prioritised.

The RSL is continuously updated to comply with the legally restricted substances, and restricted substances under investigation, in accordance with the European Chemicals Agency (ECHA).

Limits and test methods in the NA-KD RSL are also updated to conform to the standards of the AFIRM (the Apparel & Footwear International RSL Management Working Group) RSL and requirements from NA-KD's B2B customers. In case these differ, NA-KD has adopted the stricter requirement in our RSL.

NA-KD supports industry-wide sustainability efforts to minimise or eliminate the use of hazardous substances in the textile and apparel industry. The goal is to work with all NA-KD suppliers to ensure that NA-KD products comply with the global standards, that the targeted substances detailed in the RSL are reduced or eliminated, and to support sustainable innovation in the longer term.

International and EU regulations and programmes

The NA-KD RSL is based on international regulations and programmes regarding the use of chemicals in textile, footwear, accessories, beauty products, hard goods, trims, packaging, etc., which are relevant for NA-KD orders: All suppliers are requested to follow updated information on the website of:

AFIRM RSL	AFIRM Restricted Substances List (V 03) 2018 https://afirm-group.com/wp-content/uploads/2024/03/2024_AFIRM_RSL_2024_0314_EN-1.pdf
BPR	Biocidal Products Regulation, (EU) 528/2012
ECHA	European Chemicals Agency (http://echa.europa.eu/home_en.asp)
ECHA SVHC-List	Substances of Very High Concern (http://echa.europa.eu/chem_data/candidate_list_table_en.asp)
EU POPs	Persistent Organic Pollutants Regulation
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (EG nr 1907/2006) EC Regulation 1223/2009 on cosmetics

RoHS	Restriction of Hazardous Substances Directive of Electrical devices
Battery Directive	Restriction of chemicals and producer's responsibility of batteries
Food Contact Regulation	https://ec.europa.eu/food/food/chemical-safety/food-contact-materials_en https://ec.europa.eu/environment/topics/waste-and-recycling/rohs-directive_en
Proposition 65	https://oehha.ca.gov/proposition-65/proposition-65-list

National regulations

The aim is for the NA-KD RSL to be consistent with national or country-specific regulations or legislation, in addition to EU and international regulations. The following regulations should therefore be considered by all suppliers in the production of NA-KD products and merchandise:

EUROPEAN UNION (EU/EEA):

Restrictions (EU/EEA)

Restrictions are regulatory measures to protect human health and the environment from unacceptable risks posed by chemicals. Restrictions may limit or ban the manufacture, placing on the market or use of a substance. A restriction can apply to any substance on its own, in a mixture or in an article, including those that do not require registration. Restrictions setting out conditions for the placing on the market of substances apply to both domestic production and imports.

Chemical's legislation in EU/EEA

There is a range of chemicals regulations in EU/EEA that cover requirements of articles and/or chemical products depending on to what extent certain hazardous chemicals pose possible unacceptable risk to users and the environment under normal foreseeable conditions/use.
High risk hazardous chemicals focused chemicals legislation.

- REACH (EU Regulation 1907/2006) and related amendments

- EU POP regulation (EU Regulation 850/2004 and 519/2012) and related amendments
- Biocide Product regulation (EU Regulation 528/2012) and related amendments.
- Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and related amendments.

High risk products focused chemicals legislation.

EU directive concerning packaging materials (94/62/EC) and related amendments.

- The Toy Safety Directive 2009/48/EC
- Regulation (EC) 1223/2009 on cosmetic products
- RoHS Directive (2011/65 / EU) restricting the presence of hazardous chemical substances in electrical and electronic equipment.
- And more....

Duty to inform your customer on substances for authorisation (EU/EEA)

Substances of **V**ery **H**igh **C**oncern (SVHC) are listed on the Candidate List for authorization of the Regulation (EC) No 1907/2006 (REACH). All professional actors have an obligation to inform their consumers about the content of SVHC (as a minimum the name of the substance(s)) exceeding 0.1 % weight by weight (= 1000 mg/kg) in individual parts of an article, that are defined as articles. If the consumers are professional actors, there is an immediate information duty, but within 45 days for private consumers.

SCIP[1] (Substances of Concern In articles, as such or in complex objects (Products)

Background

When articles become waste, the presence of hazardous substances can make the waste unsuitable for recycling. Within the EU, there is a goal of non-toxic material cycles. To promote such a development, the European Chemicals Agency, ECHA, has been commissioned to create the SCIP database where suppliers of articles must report the presence of **S**ubstances of **V**ery **H**igh **C**oncern (SVHC). This information of SVHC will then be available during the entire life cycle of the article, including in the waste phase. This rule is new and is found in the Waste Directive 2008/98/EC.

Enforcement from 5 January 2021

[1] https://echa.europa.eu/sv/scip

Every manufacturer, importer or distributor of an article, which is placed on the market in the EU / EEA that contains a SVHC on the candidate list in REACH in a content of more than 0.1% by weight must provide information to the SCIP database at ECHA. It applied from 5 January 2021.

This does not apply to

- Retailers, who are not EU-importers or EU-producers, that only sell articles directly to private consumers, such as stores.
- companies that import articles for their own use.

Provision of data to SCIP

The manufacturer, importer or distributor of an article that contains more than 0.1 percent of a SVHC that is on the candidate list must send the following information to ECHA:

- information on the identity of the article.
- the SVHC chemical name, concentration range and where in the article the SVHC is found.
- other information on how to handle the product safely.

National chemicals legislation within EU/EEA

Denmark	Denmark Regulation
Norway	Norwegian Product Regulations
Germany	GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances)
	Germany Consumer Goods Ordinance
	LFGB: Lebensmittel- und Futtermittelgesetzbuch (Food, Consumer Goods and Feed Code)
Finland	Finland Regulation
Netherlands	Netherlands Regulation
Sweden	Sweden Regulation
Switzerland	Swiss Chem RRV
	Swiss EDI Ordinance

ASIA and OCEANIA:

Australia	ACCC: Australian Competition and Consumer Commission
	Australian Market Requirement
	POPs: Persistent Organic Pollutants convention
China	Chinese National General Safety Technical Code GB18401
Japan	Japanese Industrial Standards
New Zealand	NZ Market Requirement

NORTH and CENTRAL AMERICA:

United States (USA)

The Toxic Substances Control Act of 1976 is a US Federal law that provides the US EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides.

The official text of TSCA as amended by Frank R. Lautenberg Chemical Safety Act of the 21st Century is available in the United States Code, from the U.S. Government Printing Office TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, mercury and lead (such as -lead based paint).

TSCA restriction: means that the substance is restricted in TSCA.

TSCA assessment: Chemicals that have been designated as a high priority or for which risk evaluation has begun. “Draft Scope”: EPA has published a draft scope document for public comment. “Final Scope”: EPA has published a final scope document (or problem formulation for the first 10). “Draft risk evaluation”: EPA has published a draft risk evaluation. “Final risk evaluation”: EPA has completed a final risk evaluation.

California Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement

Act of 1986, was enacted as a ballot initiative in November 1986. The proposition protects the state's drinking water sources from being contaminated with chemicals known to cause cancer, birth defects or other reproductive harm, and requires businesses to inform Californians about exposure to such chemicals.

Proposition 65 requires the state to maintain and update a list of chemicals known to the state to cause cancer or reproductive toxicity.

USA	ASTM: American Society for Testing and Materials, Consumer Product Safety Commission California Proposition 65 (Prop 65) CPSC: US Consumer Product Safety Commission CPSIA: US Consumer Product Safety Improvement Act EPA: US Environmental Protection Agency FD&C ACT: Federal Food, Drug, and Cosmetic Act TSCA restriction or assessment: (US Federal Toxic Substances Control Act) of existing chemicals
Canada	CPSA: Canadian Consumer Product Safety Act
Mexico	Official Mexican Standards, The Federal Consumer Protection Law of Mexico

Chemical Risk Matrix

NOTE: For recycled materials, additional testing may be required at Level 1; check with each brand on requirements.

Substance	Natural Fibers	Synthetic Fibers	Natural & Synthetic Blends	Artificial Leather	Natural Leather	Natural Materials	Metals	Other: Porcelain, Ceramic, Glass, Crystal, Etc.	Feathers & Down	Polymers								Coatings & Prints	Glue
										EVA	PU Foams	All other PU & TPU	Rubber Excludes Latex and Silicon Rubbers	Polycarbonate	ABS	PVC	All Other Foams, Plastics & Polymers		
Acetophenone and 2-Phenyl-2-Propanol										2									
Acidic and Alkaline Substances (pH)	1	1	1	1	1														
Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs), including all isomers	1	1	1	1	1	1			1	1	1	1	1	1	1	1	1	1	1

Azo-amines and Aryl Amine salts	1A	1A	1A	1 A	1 A	1 A			1A									1		
Bisphenols		1	1	1	1					2	2	2	2	1	2	2	2			
Chlorinated Paraffins				2J	1					2	2	1	1	2	2	1	2			
Chlorophenols	2	2	2		2															
Chlorinated Benzenes and Toluenes		2	2	2																
Dimethylfumarate (DMFu)					2															
Dyes, Forbidden and Disperse		1A	1A	1A														2		
Dyes, Navy Blue		2	2																	
Flame Retardants	2B																			
Fluorinated Greenhouse Gases																				
Formaldehyde	1	1	1	2	1	1C							2					1	1	

Level 1 for dyed/colored materials.
Level 2 if Flame Retardant use or contamination is suspected.
Level 1 for Wood, Paper, and Straw materials.
Level 2 for Wool materials.
Level 2 if extractrable Chrome above 1 ppm.
Copper is exempt from restriction limits in Metal parts.
Level 2 for plant-based fibers; N/A for animal-based fibers.

Level 1 for Cadmium and Lead only; Crystal is exempt for Lead.
Level 1 for PVC materials.
Level 2 for Styrene/Butadiene Rubbers (SBRs) only.
Level 1 if a Fluorinated finish is applied.
Level 1 if Rubber or black Polymeric materials, otherwise Level 2.
Level 1 for PU-based materials.

Substance	Natural Fibers	Synthetic Fibers	Natural & Synthetic Blends	Artificial Leather	Natural Leather	Natural Materials	Metals	Other: Porcelain, Ceramic, Glass, Crystal, Etc.	Feathers & Down	Polymers								Coatings & Prints	Glue
										EVA	PU Foams	All other PU & TPU	Rubber Excludes Latex and Silicon Rubbers	Polycarbonate	ABS	PVC	All Other Foams, Pl		

																		astics&Polymers		
Heavy Metals, Chromium VI	2D	2E			1															
Heavy Metals, Extractable	1	1	1	2	1		2F			2	2	2	2	2	2	2	2	2	2	
Heavy Metals, Nickel Release							1													
Heavy Metals, Total	2G		2G	1	2		1	1H		1	1	1	1	1	1	1	1	1	2	
Monomers, Styrene & Vinyl Chloride				1J									2K		2	1		1J		
N-Nitrosamines													2							
Organotin Compounds		2	2	1	2						1	1	1			1	1	1	1	
Ortho-phenylphenol (OPP)	2	2	2	2	2													2		
Ozone-depleting Substances																				

Perfluorinated and Polyfluorinated Chemicals (PFAS)	1L																			
Pesticides, Agricultural																				
Phthalates				1						1	1	1	1	2	2	1	1	1	1	
Polycyclic Aromatic Hydrocarbons (PAHs)				2						1 M	1 M	1M	1			1M	1 M	1 M	1M	
Quinoline		2	2																	
Solvents / Residuals, DMFa				1							1	1						1 N	1N	
Solvents / Residuals, DMAC and NMP				1							2	2					2	2	2	
Solvents / Residuals, Formamide										2								2		
UV Absorbers / Stabilizers										2	2	2	2	2	2	2	2			
Volatile Organic Compounds (VOCs)				2						2	2	2	2	2	2	2	2	2	1	

Level 1 for dyed/colored materials.
Level 2 if Flame Retardant use or contamination is suspected.
Level 1 for Wood, Paper, and Straw materials.
Level 2 for Wool materials.
Level 2 if extractrable Chrome above 1 ppm.
Copper is exempt from restriction limits in Metal parts.
Level 2 for plant-based fibers; N/A for animal-based fibers.

H. Level 1 for Cadmium and Lead only; Crystal is exempt for Lead.
J. Level 1 for PVC materials.
K. Level 2 for Styrene/Butadiene Rubbers (SBRs) only.
L. Level 1 if a Fluorinated finish is applied.
M. Level 1 if Rubber or black Polymeric materials, otherwise Level 2.
N. Level 1 for PU-based materials.

The risk matrix is only a guidance to point out high risk or low risk substances in various materials.
This is not claiming to provide full information.

- Red = Higher risk. Testing required.
- Orange = Lower risk. Testing recommended and may be required at brand discretion.
- Blank = Lowest risk. Not anticipated in material.

4 RESTRICTED SUBSTANCE LIST

RSL Overview

Alkylphenols (APs) & Alkylphenolethoxylates (APEOs)
Other Surfactants
AZO-arylamines
Biocides
Bisphenols
Chlorinated Paraffins (CPs)
Chlorophenols
Chlorinated Organic Solvents
Disperse Dyes
Dyes - Acid, Basic, Direct, Other
Flame retardants
Formaldehyde

Metals
Monomers
N-Nitrosamines
Organotin Compounds
Ortho-phenylphenol
Ozone-depleting Substances
Perfluorinated & Polyfluorinated Chemicals (PFAS)
Pesticides, Agricultural and Residual
pH-Acidic & Alkaline Substances
Phthalates
Polycyclic Aromatic Hydrocarbons (PAHs)
Polyvinyl Chloride (PVC)
Silicones
Solvents / Residuals
Volatile Organic Compounds (VOCs)
Requirements for Cosmetic Products

ABBREVIATIONS AND DEFINITIONS

ABBREVIATION	DEFINITION
CADS	Cooperation for Assuring Defined Standards for Shoe- and Leather Goods Production e.V.
CAS no.	Chemical Abstract Service Number

CEN	Comité Européen de Normalisation (CEN)
CPSC	Standard Operating Procedure edited by the Consumer Product Safety Commission
DIN	Standard edited by the Deutsches Institut für Normung (German Institute for Standardization)
EN	European Standard edited by the European Committee for Standardization
EPA	Environmental Protection Agency
ISO	International Standard edited by the International Organization for Standardization
LC-MS	Liquid chromatography-mass spectrometry (analytical chemistry technique that combines the physical separation capabilities of liquid chromatography with the mass analysis capabilities of mass spectrometry.
LFGB	Lebensmittel-, Bedarfsgegenstände-, und Futtermittelgesetzbuch (Food, Consumer Goods and Feed Code)
GC	Gaschromatography (technique for the qualitative or quantitative separation of the components of mixtures of compounds; characterised by the use of the mobile phase gas moving relative to a stationary phase, liquid or solid).
JIS	Japanese Industry Standards
mg/kg	milligram per kilogram (unit describing concentrations of chemical substances, see also ppm)

MS	Mass Spectrometry (analytical technique that measures the mass/charge ratio of the ions formed when a molecule or atom is ionised, vaporised and introduced into a vacuum)
NA-KD Limit	The maximum allowable concentration in a component, by NA-KD standards
ppm / ppb	Parts Per Million / Parts Per Billion (units describing concentrations of chemical substances)
Reporting Limit	The value above which test results should be reported
GC-MS	See GC respectively MS
µg	Microgram

Measurement units and conversion

The NA-KD RSL uses the European *mg/kg* as a standard measurement unit of chemicals or contaminate concentration. The measurement is converted 1:1 to ppm (parts per million): 1 mg/kg = 1 ppm

ALKYLPHENOLS (APs) & ALKYLPHENOL ETHOXYLATES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Nonylphenol (NP), mixed isomer Octylphenol (OP), mixed isomers	Various	APs can be used as antioxidants to stabilise or protect polymers, and as intermediaries in the production of APEOs.	EN ISO 21084:2019 (textile), (AP) Textiles: EN ISO 18254-1:2016, 2:2019 (APEO) Leather: EN ISO 18218-1:2023 (direct method) EN ISO 18218-2:2019 (APEO indirect method	Usage ban.	Less than: Sum of AP: 5 mg/kg Sum of APEO/: 20 mg/kg
Nonylphenol Ethoxylates (NPEOs) Octylphenol Ethoxylates (OPEOs)	Various	APEOs can be found in, or used as, detergents, softeners, emulsifying or dispersing agents for dyes and prints, impregnating agents, scouring agents, wetting agents, spinning oils, degumming for silk production, dyes and pigment preparations, down or feather fillings and polyester padding, etc.			
Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerization, covering any individual isomers and/ or combinations thereof (PDDP)		PDDP are a part of the alkylphenols (AP) and may occur together with mixtures of APEO and other AP. Preparation of lubricant additive materials and of fuel system cleaners.			
4-(1,1,3,3-tetramethylbutyl)phenol (4-tert-OP)	140-66-9				

4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (4-tert-OPnEO)					
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (4-tert-OPnEO, UVCB substance)					
4-Nonylphenol, branched and linear (4-NP)					
4-Nonylphenol, branched and linear, ethoxylated (4-NPnEO)					
4-tert-butylphenol	98-54-4				
Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerization, covering any individual isomers and/ or combinations thereof (PDDP)					
tris(4-nonylphenyl, branched and linear) phosphite (TNPP)					

OTHER SURFACTANTS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8	Inks and toners, coating products, photo-chemicals, polymers, adhesives and sealants and fillers, putties, plasters, modelling clay.	Not yet available	Less than: 500 mg/kg each	Less than: 100 mg/kg each

AZO-ARYLAMINES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT

4-Aminobiphenyl Benzidine 4-Chlor-o-toluidine 2-Naphthylamine o-Aminoazotoluene 2-Amino-4-nitrotoluene p-Chloraniline 2,4-Diaminoanisole 4,4’-Diaminodiphenylmethane 3,3’-Dichlorobenzidine 3,3’-Dimethoxybenzidine 3,3’-Dimethylbenzidine 3,3’-dimethyl-4,4’-diaminodiphenylmethane p-Cresidine 4,4’-Methylen-bis(2-chloraniline) 4,4’-Oxydianiline 4,4’-Thiodianiline o-Toluidine 2,4-Toluylendiamine 2,4,5-Trimethylaniline 2,4 Xylidine 2,6 Xylidine	92-67-1 92-87-5 95-69-2 91-59-8 97-56-3 99-55-8 106-47-8 615-05-4 101-77-9 91-94-1 119-90-4 119-93-7 838-88-0 120-71-8 101-14-4 101-80-4 139-65-1 95-53-4 95-80-7 137-17-7 95-68-1 87-62-7 90-04-0	Azo dyes and pigments are synthetic organic dyes that incorporate one or more azo groups containing nitrogen (-N=N-). There are thousands of azo dyes and pigments, and more than half of all commercial dyes belong to this category. Azo dyes (including those based on benzidine) may release carcinogenic arylamines, some of which are regulated and should not be used for dyeing of textiles and leather.	Textiles: EN ISO 14362-1:2017 and EN ISO 14362 -3:2017 Leather: EN ISO 17234-1: 2020	Less than: 20 mg/kg	Less than: 5 mg/kg each

2-Methoxyaniline(= o-Anisidine) p-Aminoazobenzene 4-chloro-o-toluidinium chloride 2-Naphthylammoniumacetate 2,4,5-trimethylaniline hydrochloride 4-methoxy-m-phenylene diammonium sulphate; 2,4-diaminoanisole sulphate	60-09-3 3165-93-3 553-00-4 21436-97-5 39156-41-7		p-Aminoazobenzene: Textiles: EN ISO 14362-3:2017 Leather: EN ISO 17234-2:2011		
Quinoline	91-22-5	Precursor to quinoline dyes	DIN 54231-2005 (inhouse method)	Less than: 50 mg/kg	Less than: 10 mg/kg

BENZOTRIAZOLES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) Bumetrizole (UV-326), 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327), 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328), 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329),	3846-71-7 3896-11-5 3864-99-1 25973-55-1 3147-75-9 36437-37-3	UV-stabilizer for plastics, polyurethanes and rubber and constituent in formulations used for coating of surfaces, e.g. cars or special industrial wood coatings. Also used in dishwasher detergents, dry cleaning equipment, and de-icing/anti-icing fluids.	ISO 24040:2022 (textiles)	Less than: 1000 mg/kg	Less than: 50 mg/kg

2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6 -(sec-butyl)phenol (UV-350),					

BIOCIDES

Biocidal agents are both used as process chemicals to prohibit growth of microbes during production and as product related chemicals to render biocidal property to the article.
The use of biocidal products in articles should be kept limited, for instance to avoid the increase of resistant bacteria. If the use of biocidal agents is essential, there are biocidal agents approved for PT9 (product type 9, that includes textiles, polymers, and leather) according to the Biocidal Product Regulation (EU 528/2012).
All biocides listed in this RSL are restricted or banned according to EU chemicals legislation. Biocides are prohibited from use on NA-KD products or materials.

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Cu-HDO (Bis-(N-cyclohexyldiazeniumdioxy) –copper)	312600-89-8		Not yet available	Usage ban	Less than: 20 mg / kg
Carbendazim	10605-21-7		Not yet available	Usage ban	Less than: 10 mg / kg
Dimethyl Fumarate (DMFu)	624-49-7		EN 17130:2019 (textile) EN ISO 16186:2021 (footwear)	Less than: 0.1 mg/kg	Less than: 0.025 mg/kg

Guanidine, N,N'''-1,6-hexanediylbis[N'-cyano-, polymer with 1,6-hexanediamine, hydrochloride (PHMB 1600; 1.8)	27083-27-8		Not yet available	Usage ban	Less than: 10 mg / kg
Pentachlorophenol (PCP) and all isomers of Tetrachlorophenols (TeCP)	87-86-5 Several		EN 17134-2:2023 (textile) EN ISO 17070:2015 (leather) CEN/TR 14823:2003 (wood) EN ISO 15320:2011 (pulp and paper)	Usage ban	Less than: 0,1 mg / kg
Permethrin	52645-53-1		Not yet available	Usage ban	Less than: 5 mg / kg
Silver and its compounds	Several		Not yet available	Usage ban	Less than: 10 mg / kg Nano silver is banned
Trisubstituted tin organic compounds	Several		EN ISO 22744-1,-2:2020 (textile) CEN ISO/TS 16179:2012 (footwear)	Usage ban	Less than: 0,2 mg / kg
Triclosan	3380-34-5		EN 17134:2019 (2-phenylphenol (OPP) and triclosan in textile materials) EN ISO 13365-1,-2:2020 (TCMTB, PCMC, OPP, OIT, content in leather)	Usage ban	Less than: 10 mg / kg
2-phenylphenol (OPP)	90-43-7 13707-65-8 (potassium salt),			Usage ban	Less than: 10 mg / kg

	132-27-4 (sodium salt)				
Zincpyrithion	13463-41-7		Not yet available	Usage ban	Less than: 100 mg / kg
Bronopol	52-51-7		Not yet available	Usage ban	Less than: 100 mg / kg
Thiram	137-26-8		Not yet available	Usage ban	Less than: 100 mg / kg
Metam-sodium ((sodium N-methyldithiocarbamate)	137-42-8		Not yet available	Usage ban	Less than: 100 mg / kg
Parabenes	Several		Not yet available	Usage ban	Less than: 100 mg / kg
Polyhexamethylene biguanide hydrochloride with a mean number-average molecular weight (Mn) of 1415 and a mean polydispersity (PDI) of 4.7 (PHMB(1415;4.7))	Several		Not yet available	Usage ban	Less than: 100 mg / kg

Sodium p-chloro-m-cresolate	15733-22-9		Not yet available	Usage ban	Less than: 100 mg / kg

BISPHENOLS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Bisphenols	80-05-7 4,4'-isopropylidene diphenol (BPA) 77-40-7 4,4'-(1-methylpropylidene)bisphenol (BPB) 6807-17-6 2,2-bis(4'-hydroxyphenyl)-4-methylpentane 80-09-1 4,4'-sulphonyldiphenol	Mainly used in manufacture of polycarbonate epoxy resins and chemicals, hardener in epoxy resins and in thermal prints. May be used as catalyst and antioxidant for processing PVC but also used in the production of flame retardants, and as intermediates in the manufacture of fungicides and dyes.	EN ISO 11936:2023	Less than: 20 mg/kg	Less than: 1 mg/kg

	80-07-9 Bis(4-chlorophenyl) sulphone (BPCS)				
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	Uses in hydraulic fluids, lubricants and greases, metal working fluids, adhesives and sealants, fuels and polymers. This substance is used for the manufacture of rubber products and plastic products	Not yet available	Less than: 20 mg/kg	Less than: 1 mg/kg

CHLORINATED PARAFFINS (CPs)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Short-chain chlorinated Paraffins (SCCP) (C10-C13)	85535-84-8	Chlorinated Paraffin may be used as flame retardants, softeners fatliquoring agents in leather, or as plasticisers in plastics, rubbers, inks, paints, adhesives, and coatings.	EN ISO 22818:2021 (textile)	Less than: 1000 mg/kg	Less than: 100 mg/kg
Medium-chain chlorinated Paraffins (MCCP) (C14-C17)	85535-84-9		EN ISO 18219-1:2021 (SCCP, leather) EN ISO 18219- 2:2021 (MCCP, leather)	Less than: 1000 mg/kg	Less than: 100 mg/kg

CHLOROPHENOLS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT

2,3,4-Trichlorophenol 2,3,5-Trichlorophenol 2,3,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 3,4,5-Trichlorophenol 2,3,4,5-Tetrachlorophenol (TeCP) 2,3,4,6-Tetrachlorophenol (TeCP) 2,3,5,6-Tetrachlorophenol (TeCP) Pentachlorophenol (PCP)	15950-66-0 933-78-8 933-75-5 95-95-4 88-06-2 609-19-8 4901-51-3 58-90-2 935-95-5 87-86-5	Chlorophenols are polychlorinated compounds mainly used as pesticides, preservatives, or disinfectants, for example to kill insects and prevent mould in cotton production and in transporting or storing fabrics. Chlorophenols are toxic to human and aquatic life, and have been found toxic when inhaled, ingested, or absorbed through the skin. Short term exposure may lead to damage of the central nerve system and long-term exposure can cause reproductive effects, liver and kidney damage, and cancer.	EN ISO 17070:2015 (leather) CEN/TR 14823:2003 (wood) EN ISO 15320:2011 (pulp and paper) EN 17134-2:2023 (textile)	Less than: 0.5 mg/kg each	Less than: 0.1 mg/kg each

CHLORINATED ORGANIC SOLVENTS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
2-Chlorotoluene 3-Chlorotoluene 4-Chlorotoluene 2,3-Dichlorotoluene 2,4-Dichlorotoluene 2,5-Dichlorotoluene 2,6-Dichlorotoluene 3,4-Dichlorotoluene 2,3,6-Trichlorotoluene 2,4,5-Trichlorotoluene	95-49-8 108-41-8 106-43-4 32768-54-0 95-73-8 19398-61-9 118-69-4 95-75-0 2077-46-5 6639-30-1	Chlorinated Organic Solvents (e.g. chlorobenzenes and chlorotoluene's) are a group of molecules that can be used as carriers (transporting dyes into fibres) in the process of dyeing wool/polyester fibres or polyester. They may also be used as solvents.	EN 17137:2018	Less than: 1 mg/kg	Less than: 0.1 mg/kg each

2,3,4,6-Tetrachlorotoluene	875-40-1				
2,3,5,6-Tetrachlorotoluene	1006-31-1				
Pentachlorotoluene	877-11-2				
1,3-Dichlorobenzene	541-73-1				
1,4-Dichlorobenzene	106-46-7				
1,2,3-Trichlorobenzene	87-61-6				
1,2,4-Trichlorobenzene	120-82-1				
1,3,5-Trichlorobenzene	108-70-3				
1,2,3,4-Tetrachlorobenzene	634-66-2				
1,2,3,5-Tetrachlorobenzene	634-90-2				
1,2,4,5-Tetrachlorobenzene	95-94-3				
Pentachlorobenzene	608-93-5				
Hexachlorobenzene	118-74-1				
α,α,α,4-tetrachlorotoluene; p-chlorobenzotrichloride	5216-25-1				
α,α,α-trichlorotoluene; benzotrichloride	0098-07-07				
α-chlorotoluene; benzyl chloride					
1,2-Dichlorobenzene	100-44-7				
	95-50-1				

DISPERSE DYES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT

C.I. Disperse Blue 1 C.I. Disperse Blue 3 C.I. Disperse Blue 7 C.I. Disperse Blue 26 C.I. Disperse Blue 35 C.I. Disperse Blue 102 C.I. Disperse Blue 106 C.I. Disperse Blue 124 C.I. Disperse Brown 1 C.I. Disperse Orange 1 C.I. Disperse Orange 3 C.I. Disperse Orange 11 C.I. Disperse Orange 37/76/59 C.I. Disperse Orange 149 C.I. Disperse Red 1 C.I. Disperse Red 11 C.I. Disperse Red 17 C.I. Disperse Red 151 C.I. Disperse Yellow 1 C.I. Disperse Yellow 3 C.I. Disperse Yellow 7 C.I. Disperse Yellow 9 C.I. Disperse Yellow 23	2475-45-8 2475-46-9 3179-90-6 3860-63-7 12222-75-2 69766-76-6 12223-01-7 61951-51-7 23355-64-8 2581-69-3 730-40-5 82-28-0 12223-33-5 / 13301-61-6 / 51811-42-8 85136-74-9 2872-52-8 2872-48-2 3179-89-3 61968-47-6 119-15-3 2832-40-8 6300-37-4 6373-73-5 6250-23-3	Disperse dyes are water-insoluble colourants mainly used for colouring synthetic fibres (including acetate, polyester, and polyamide). Some disperse dyes may cause allergic reactions, in an estimated 5% of the population.	EN ISO 16373-2:2014 (textile)	Less than: 30 mg/kg each	Less than: 10 mg/kg each

C.I. Disperse Yellow 39 C.I. Disperse Yellow 49 C.I. Disperse Yellow 56	12236-29-2 54824-37-2 54077-16-6				

DYES- ACID, BASIC, DIRECT, OTHER (CMR dyes)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
C.I. Acid Red 26 C.I. Basic Red 9 C.I. Basic Green 4 C.I. Basic Violet 3 C.I. Basic Violet 14 C.I. Basic Blue 26 C.I. Direct Black 38 C.I. Direct Blue 6 C.I. Direct Red 28 C.I. Direct Brown 95 4-Dimethylaminoazobenzene (Solvent Yellow 2) C.I. Solvent Blue 4	3761-53-3 569-61-9 569-64-2 2437-29-8 10309-95-2 548-62-9 632-99-5 2580-56-5 1937-37-7 2602-46-2 573-58-0 16071-86-6 60-11-7 6786-83-0 561-41-1 6786-83-0	Acid, Basic, and Direct dyes are fibre reactive dyes with different characteristics, which have in common that they react with functional groups in the fibres.	EN ISO 16373-2:2014 (textile)	Less than: 30 mg/kg each	Less than: 10 mg/kg each

4,4'-bis(dimethylamino)-4''-(methylamino) trityl alcohol Michler's base Michlers's ketone Acid red 114 Direct Blue6	101-61-1 90-94-8 6459-94-5 2429-74-5 6459-94-5 2602-46-2				
Component 1: C39H23ClCrN7O12S.2Na (Navy blue) Component 2: C46H30CrN10O20S2.3Na (Navy blue)	118685-33-9 Not allocated	Navy blue colourants are regulated and may not be used for dyeing of textiles. (Index 611-070-00-2)		Less than: 30 mg/kg	Less than: Navy blue: 30 mg/kg

FLAME RETARDANTS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Pentabromodiphenyl ether (PentaBDE) Octabromodiphenyl ether (OctaBDE) Decabromodiphenyl ether (DecaBDE) Tetrabromobisphenol A (TBBPA)	32534-81-9 32536-52-0 1163-19-5 79-94-7	Flame-retardant chemicals have been used, although rarely, to meet flammability requirements in apparel and footwear, and should no longer be used in such products.	EN ISO 17881- 1:2016	Usage ban.	Less than: 5 mg/kg each

Polybromobiphenyls (PBB) Hexabromocyclododecane (HBCDD) 2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	59536-65-1 3194-55-6 3296-90-0				
Tris(1,3-dichloro-isopropyl) phosphate (TDCPP) Trixylyl phosphate (TXP) Tris(2,3-dibromopropyl) phosphate (TRIS) Tris(1-aziridinyl) phosphine oxide) (TEPA) Tris(2-chloroethyl) phosphate (TCEP) Bis(2,3-dibromopropyl) phosphate (BDBPP)	13674-87-8 25155-23-1 126-72-7 545-55-1 115-96-8 5412-25-9		EN ISO 17881-2:2016		
2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5 1522-92-5	BMP: manufacture of polymer resins and in one component foam (OCPF) application. TBNPA: polymer production manufacture of plastics products, such as foam seating and bedding products, including compounding and conversion and as an intermediate. DBPA: registered as an intermediate in the preparation of flame retardants, insecticides, and pharmaceuticals. Main use is in the production of tris	Not yet available	Usage ban.	Less than: 10 mg/kg

	96-13-9	(1,2,3-dibromopropyl) phosphate, commonly abbreviated TRIS.			

FORMALDEHYDE

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Formaldehyde	50-00-0	Formaldehyde may be used as an anti-creasing and anti-shrinking agent in textiles, or in polymeric resins. It can be found in plastic, synthetic materials (inc. PU and PVC), natural fibres, synthetic fibres, coating/printing, leather. Formaldehyde is a toxic, allergenic and carcinogenic substance. May irritate eyes and cause headaches, throat burning or breathing difficulties.	EN ISO 14184-1:2011 (Free and hydrolysed water extracted formaldehyde in textiles), EN ISO 14184-2:2011 (formaldehyde emissions from textile textile) EN ISO 14184-3:2023 (Free and hydrolysed extracted formaldehyde in textiles using HPLC) EN ISO 17226-1:2021(leather) EN ISO 17226-2:2019 (leather) EN ISO 17226-3:2011(formaldehyde emissions from leather) Textiles, wood, and paper: JIS L 1041-1983 A (Japan Law 112) or EN ISO 14184-1:2011	Less than: 75 mg/kg	Less than: 15 mg/kg
Glutaral	111-30-8	Also called glutaraldehyde and occur in vegetable tanning of leather (chrome free tanning). Also used in cosmetics.	See test methods for formaldehyde	Less than: 15 mg/kg	Less than: 15 mg/kg

METALS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Antimony (Sb)	7440-36-0	Antimony can be found in, or used as, a catalyst in polymerisation of alloys, fixing agents, flame retardants, pigments, and polyester.	Textiles: EN ISO 16711-2:2015 Leather: EN ISO 17072-1:2019	Less than: 30 mg/kg	Less than: Extractable: 0.5 mg/kg
Arsenic (As)	7440-38-2	Arsenic and its compounds can be used in defoliants, pesticides, and preservatives, for cotton, inks, paints, plastics, trims and synthetic fibres.	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile) EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	Extractable: 0.2 mg/kg Total: 100 mg/kg	Less than: Extractable: 0.02 mg/kg Total: 10 mg/kg
Barium (Ba)	7440-39-3	Barium and its compounds can be found in pigments for inks, surface coatings and plastics, and in leather tanning, dyeing, filler in plastics, mordant and textile finish.	Textiles: EN 16711-2:2015 Leather: EN ISO 17072-1:20172019	Less than Extractable: 50 mg/kg	Less than: Extractable: 50 mg/kg
Cadmium (Cd)	7440-43-9	Cadmium is a naturally occurring and abundant metal. Cadmium compounds are mainly used in biocides, fertilisers, and paints, as a colourant (especially in green,	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile)	Less than: Extractable: 0.1 mg/kg	Less than: Extractable: 0.1 mg/kg

		orange, red and yellow), and as a stabiliser in plastics, pigments, and coatings. For example, they can be used in synthetic fibres (including PU, PVC) coating/printing, and plastic-coated trims (such as buttons, buckles, zippers, etc).	EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	Total: 40 mg/kg	Total: 10 mg/kg
Chromium VI	18540-29-9	Chromium VI is typically associated with leather tanning but may also be used in the dyeing of wool.	Textiles: EN 16711-2:2015 with EN ISO 17075-1:2017 if Cr is detected. Leather: EN ISO 17075-1:2017 and EN ISO 17075-2:2017 EN ISO 10195:2021 (ageing of leather) For confirmation in case the extract causes interference Conditions for leather ageing: 24 hours, 80 degrees C, maximum 5% relative humidity, no ventilation. Ageing test is used at brand discretion.	Less than: Leather: 3 mg/kg Less than: Knitted textiles: 1 mg/kg	Less than: Leather: 3 mg/kg Knitted textiles: 0.5 mg/kg
Cobalt (Co)	7440-48-4	Cobalt and its compounds may be used in alloys, dyestuff, pigments, and the production of plastic buttons	Extractable: All materials except leather: EN 16711-2:2015 Leather:	Less than: Extractable: 0.5 mg/kg Extractable:	Less than: Extractable: 0.5 mg/kg

			EN ISO 17072-1:2019 Total: All materials except leather: EN 16711-1:2015 Leather: EN ISO 17072-2:2022	4 mg/kg	
Copper (Cu)	7440-50-8	Copper and its compounds may be used as an antimicrobial agent in textiles and can be found in alloys and pigments.	Extractable: All materials except leather: EN 16711-2:2015 Leather: EN ISO 17072-1:2019 Total: All materials except leather: EN 16711-1:2015 Leather: EN ISO 17072-2:2022	Less than: Extractable: 0.5 mg/kg Less than: Extractable: 50 mg/kg	Less than: Extractable: 0.5 mg/kg

Lead (Pb)	7439-92-1	May be associated with inks, paints, pigments, plastics, surface coatings and lamination on fabric. May be found in painted buttons, snaps, zippers, etc.	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile) EN 16711-3:2019 (migrated content, textiles) EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	All materials Less than: Total: 90 mg/kg Textiles Less than: Extractable: 0.2 mg/kg	Less than: Extractable: 0.1 mg/kg Less than: Total: 10 mg/kg
Mercury (Hg)	7439-97-6	Mercury can be used as a component in dyestuffs and as a catalyst in the dyeing process. Mercury compounds may also be found as contaminants in caustic soda (NaOH) and in pesticides.	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile) EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	All materials Less than: Total: 0.5 mg/kg	Less than: Extractable: 0.02 mg/kg Less than: Total: 10 mg/kg
N-(hydroxymethyl)acrylamide	24-42-5	As a monomer in fluoroalkyl acrylate copolymers, adhesives, binders in papermaking and textiles to a variety of surface coatings and resins for varnishes, paints, films and sizing agents.	Test method not yet available.	Less than: 100 mg/kg	Less than: 100 mg/kg

Nickel (Ni) Release	7440-02-2	Direct, long-term skin contact may lead to allergic reactions. Essential for nickel plated earrings, necklaces, bracelets and chains, anklets, finger rings, wrist-watch cases, watch straps and tighteners.	Metal parts: EN 1811:2023 Eyewear frames: EN 16128:2015	Direct and prolong contact with skin 0.5 µg/cm2/ week; For body piercing 0.2 µg/cm2/week	Less than: 0.05 µg/cm2/week
Selenium (Se)	7782-49-2	Selenium is mainly used in glassmaking and for the production of pigments.	Extractable: All materials except leather: EN 16711-2:2015 Leather: EN ISO 17072-1:2019 Total: All materials except leather: EN 16711-1:2015 Leather: EN ISO 17072-2:2022	Less than: 460 mg/kg	Less than: 0.5 mg/kg
Tin organic analysis (all materials)	7440-31-5	Tin can be found in adhesives, coatings, metal items and polymers.	Textiles, plastics, polymers: EN ISO 22744-1,-2:2020 Footwear: CEN ISO/TS 16179:2012	Less than: Tin 0.1 mg/kg If Tin > 0.1 mg/kg, organotin analysis required	Less than: 0.1 mg/kg

MONOMERS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Styrene	100-42-5	Styrene is a precursor for polymerisation that can be found in various styrene-copolymers, e.g. in plastic buttons.	GC/MS Headspace 120 degrees C for 45 minutes or Extraction in Methanol GC/MS, sonication at 60 degrees C for 60 minutes	Less than: 30 mg/kg	Less than: 10 mg/kg
Vinyl Chloride	75-01-4	Vinyl Chloride is a precursor for polymerisation that can be found in various PVC materials (including coatings, flip flops, synthetic leather and prints).	EN ISO 6401:2008	No usage.	Less than: 1 mg/kg

N-NITROSAMINES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
N-nitrosodimethylamine (NDMA) N-nitrosodiethylamine (NDEA) N-nitrosodipropylamine (NDPA) N-nitrosodibutylamine (NDBA) N-nitrosopiperidine (NPIP) N-nitrosopyrrolidine (NPYR)	62-75-9 55-18-5 621-64-7 924-16-3 100-75-4 930-55-2	N-Nitrosamines can be found in rubber, plastic, and synthetic materials (including PU and PVC). Associated with rubber and latex products, chemical intermediaries, and finished cosmetics.	EN ISO 19577:2019	Less than: 0.5 mg/kg each	Less than: 0.5 mg/kg each

N-nitrosomorpholine (NMOR) N-nitroso N-methyl N-phenylamine (NMPhA) N-nitroso N-ethyl N-phenylamine (NEPhA)	59-89-2 614-00-6 612-64-6				

ORGANOTIN COMPOUNDS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Dibutyltin (DBT) Dioctyltin (DOT) Monobutyltin (MBT) Tricyclohexyltin (TCyHT) Trimethyltin (TMT) Trioctyltin (TOT) Tripropyltin (TPT)	Various	Organotin Compounds can be used as catalysts in glue and plastic production, and as heat stabilisers in rubber and plastics. Organotins can be found in plastics, synthetic materials (including PU and PVC), natural fibres, synthetic fibres, coating/printing, leather, rubber, inks, paints, metallic glitter, etc.	Textile: EN ISO 22744-1,-2:2020 Footwear: CEN ISO/TS 16179:2012	Less than: DBT/DOT/MBT/TCyT/TMT/TOT/TPT: 1 mg/kg each	Less than: 0.005 mg/kg pvc
Tributyltin (TBT) Triphenyltin (TPhT)				Less than: TBT/TPhT: 0.5 mg/kg each	

ORTHO-PHENYLPHENOL

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT

Ortho-phenylphenol (OPP) Potassium salt Sodium salt	90-43-7 13707-65-8 132-27-4	OPP can be used as a carrier in dyeing processes, or as a preservative in leather.	1 M KOH extraction, 12 to 15 hours at 90 degrees C, derivatization and analysis § 64 LFGB B 82.02-08 or EN ISO 17070:2015	Less than: 5 mg/kg	Less than: 5 mg/kg

PERFLUORINATED & POLYFLUORINATED CHEMICALS (PFAS)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Per and polyfluorinated alkyl substances (PFAS)	Various	PFAS are used in water and oil repellent textile finishes as well as impregnation agents in leather. Some PFAS are used as an emulsifier in the production of fluoropolymers such as polytetrafluoroethylene (PTFE) etc.	Textile: EN 17681-1:2022 (non-volatile PFAS, textiles) EN 17681-2:2022 (Volatile PFAS, textile) Leather: EN ISO 23702-1:2023	Usage ban.	Less than: 0,01 mg/kg (all PFAS but not PFOS) 0,1 (µg/m2 (PFOS)

PFAS are prohibited from use on NA-KD products or materials. For the current legal status of PFAS (March 2021), see table 1 below:

Table 1: Legal status of PFAS (February 2023)

PFAS substances, their salts and related substances	CAS	Abbr	SVHC	REACH annex XVII	EU POP regulation	Stockholm Convention
Perfluorobutane sulfonate	375-73-5	PFBS	Yes			
Perfluorohexane sulfonate	355-46-4	PFHxS	Yes		Yes	Yes
Perfluorohexanoic acid	307-24-4	PFHxA		On going		
Perfluorooctane sulfonate	307-34-6	PFOS			Yes	Yes
Perfluorononanoic acid and its sodium ammonium salts,	375-95-1 21049-39-8, 4149-60-4	PFNA	Yes	Yes		Ongoing
Perfluorodecanoic acid its sodium and ammonium salts,	335-76-2 3108-42-7 3830-45-3	PFDA	Yes	Yes		Ongoing
Pentacosafluoro tridecanoic acid	72629-94-8	PFTrDA	Yes	Yes		Ongoing
Tricosafluoro dodecanoic acid	307-55-1	PFDoA	Yes	Yes		Ongoing
Henicosafluoro undecanoic acid	2058-94-8	PFUnA	Yes	Yes		Ongoing

Heptacosafluoro tetradecanoic acid	376-06-7	PFTA	Yes	Yes		Ongoing
PFAS, C15 -C21	Several					Ongoing
Perfluoroctane acid **Ammonium pentadecafluoro octanoate**	335-67-1 3825-26-1	PFOA APFO	Yes		Yes	Yes
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	Several	HPFO-DA.	Yes			

PH-ACIDIC AND ALKALINE SUBSTANCES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
pH-value	Various	pH-values are characteristic numbers, ranging from pH 0 to pH 14, showing the content of acidic or alkaline substances in a product. pH-values above 7 are alkaline (basic), and pH-values below 7 are acidic. ph-values of products should be close to the ph-value of human skin (approx. pH 5.5), to avoid chemical burns or skin irritation.	Textiles: EN ISO 3071:2020 (KCl Solution) Leather: EN ISO 4045:2018	Textiles: 4.0 - 7.5 Leather: 3.5 - 7.0	Not applicable

PHTHALATES

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Di-Iso-nonylphthalate (DINP) Di-n-octylphthalate (DNOP) Di(2-ethylhexyl)-phthalate (DEHP) Diisodecylphthalate (DIDP) Butylbenzylphthalate (BBP) Dibutylphthalate (DBP) Diisobutylphthalate (DIBP) Di-n-hexylphtalate (DnHP) Diethylphthalate (DEP) Dimethylphthalate (DMP) Di-n-pentyl phthalate (DPENP) Dicyclohexyl phthalate (DCHP) 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) Bis(2-methoxyethyl) phthalate (DMEP) 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	28553-12-0 117-84-0 117-81-7 26761-40-0 85-68-7 84-74-2 84-69-5 84-75-3 84-66-2 131-11-3 131-18-0 84-61-7 71888-89-6 117-82-8 68515-42-4	Phthalates are a class of organic compounds, commonly used to increase flexibility in plastics or facilitate the moulding of plastic. Phthalates may be found in neoprene, textile prints, adhesives, plastic coated trims and accessories (e.g., buttons, buckles and zippers), polymeric coatings, and in flexible plastic components (including PVC and PU), etc.	Measurement: EN ISO 14389:2022 EN ISO 16181-1. -2:2021 (footwear)	Less than: 500 mg/kg each Total: 1,000mg/kg	Less than: 50 mg/kg each

1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0				
Diisopentyl phthalate (DIPP)	605-50-5				
N-pentyl-isopentylphthalate (PIPP)	776297-69-9				
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4				
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters with ≥ 0.3% of dihexyl phthalate (CAS 84-75-3)	68515-51-5				
1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (CAS 84-75-3)	68648-93-1				
Diisohexylphthalate (DIHXP)	71850-09-4				

All Ortho-phthalates are prohibited from use on NA-KD products or materials. The list above includes the most commonly used and regulated phthalates.

POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Acenaphtene Acenaphthylene Anthracene Benzo(g,h,i)perylene Fluorene Fluoranthene Indeno(1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	83-32-9 208-96-8 120-12-7 191-24-2 86-73-7 206-44-0 193-39-5 91-20-3 85-01-8 129-00-0	PAHs are natural components of crude oil and are common residues from oil refining. Oil residues containing PAHs can be added to plastics or rubber as an extender or softener. They may be found in plastics, rubber, coatings and lacquers, in printing pastes, and in the outsoles of footwear, etc.	EN 17132:2019 (textile) EN ISO 16190:2021 (footwear) AfPS GS 2019:01 PAK	Less than: 1 mg/kg each	Less than: 0.2 mg/kg each
Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo[e]pyrene Benzo[j]fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene	56-55-3 50-32-8 205-99-2 192-97-2 205-82-3 207-08-9 218-01-9 53-70-3				

POLYVINYL CHLORIDE (PVC)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Polyvinyl Chloride	9002-86-2	Vinyl Chloride is a precursor for polymerization and may be present in various PVC materials like prints, coatings, flip flops, and synthetic leather.	Bilstein Method and Infra-red spectroscopy	No usage.	Not detected through relevant test methods such as Beilstein, XRF and similar qualitative methods.

SILICONES

SUBSTANCE	**CAS NO.**	**POTENTIAL USES**	**TEST METHOD**	**NA-KD LIMIT**	**REPORTING LIMIT**
Octamethyl cyclotetrasiloxane (D4) **Decamethyl cyclopentasiloxane (D5)** **Dodecamethyl cyclohexasiloxane (D6)**	556-67-2 541-02-6 540-97-6	Precursors in silicon-based materials and chemical products.	Solvent extraction and GCMS for analysis	Less than: 100 mg/kg per siloxane	Less than: 100 mg/kg each
tris(2-methoxyethoxy)vinylsilane	1067-53-4	An adhesion promoter for various mineral-filled polymers, improving mechanical and electrical properties especially after exposure to moisture. A co-monomer for the preparation of different polymers such as polyethylene or acrylics. Plating agent and surface treating agent.	Not yet available	Less than: 100 mg/kg	Less than: 10 mg/kg

SOLVENTS / RESIDUALS

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT
Dimethylformamide (DMFa)	68-12-2	Solvent mainly used in rubber, plastics, adhesives, and polyurethane (PU) coating and printing. Water-based PU is preferable as it does not contain DMFa. 1. Shall not be placed on the market as a substance on its own, as a constituent of other substances, or in mixtures in a concentration equal to or greater than 0,3 % after 12 December 2023 . 3. By way of derogation from paragraphs 1 and 2, the obligations laid down therein shall apply from 12 December 2024 in relation to placing on the market for use, or use, as a solvent in direct or transfer polyurethane coating processes of textiles and paper material or the production of polyurethane membranes, and from 12 December 2025 in relation to placing on the market for use, or use, as a solvent in the dry and wet spinning processes of synthetic fibres. REACH annex XVII entry 76.	All materials: EN 17131:2019 (textile) CEN ISO/TR 16178:2021 (footwear) EN ISO 16189:2021 (footwear) EN 16778:2016 (gloves)	Less than: 500 mg/kg	Less than: 10 mg/kg

Formamide	75-12-7	By-product in foam production, such as EVA foam.	EN ISO 16189:2021 (footwear)	Less than: 1000 mg/kg	Less than: 10 mg/kg
Dimethylacetamide (DMAC)	127-19-5	Solvent used in the production of elastane fibres. Sometimes as a substitute for DMFa.		Less than: 1000 mg/kg	Less than: 10 mg/kg
Hydrazine C,C'-azodi(formamide) (ADCA)	302-01-2 123-77-3	Foaming agent for plastics.	Solvent extraction followed by GCMS.	Less than: 10 mg/kg	Less than: 10 mg/kg
N-Methyl-2-pyrrolidone (NMP) NEP (N- ethyl-2-pyrrolidine)	872-50-4 2687-91-4	Industrial solvent used in production of water-based Polyurethanes and other polymeric materials. Sometimes used as a paint stripper or a surface treatment for resins, textiles and metal-coated plastics.	EN ISO 19070:2016 (leather)	Less than: 1000 mg/kg	Less than: 50 mg/kg
Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol Phenol, methylstyrenated	68512-30-1	Used in adhesives and sealants, coating products, fillers, putties, plasters, modelling clay, inks, toners and polymers	Not yet available	Less than: 1000 mg/kg	Less than: 200 mg/kg

1,4-dioxane	123-91-1	Industrial applications of 1,4-dioxane are extensive, for instance, as solvent for cellulose acetate, ethyl cellulose, benzyl cellulose, resins, oils, waxes, and some dyes, as a solvent for paper, cotton, and textile processing and for various organic and inorganic compounds and products. It is also used in shampoos and other cosmetics as a degreasing agent and as a component of paint and varnish.	Not yet available	Less than: 1 mg/kg	Less than: 1 mg/kg
2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	119344-86-4	Used in inks and toners and coating products.	Not yet available	Less than: 100 mg/kg	Less than: 100 mg/kg
Melamine	108-78-1	To make electrical components, household goods, laminates, military applications, kitchenware, floor tiles, and fire-resistant and other finished fabrics.	Not yet available.	Less than: 10 mg/kg	Less than: 10 mg/kg

VOLATILE ORGANIC COMPOUNDS (VOCs)

SUBSTANCE	CAS NO.	POTENTIAL USES	TEST METHOD	NA-KD LIMIT	REPORTING LIMIT

Benzene	71-43-2	VOCs are associated with solvent-based processes such as solvent-based Polyurethane coatings and glues/adhesives.	For general VOC screening: GC/MS headspace 120 °C, 45 minutes.	Less than: 5 mg/kg	Less than: 1 mg/kg
Carbon Disulfide Carbon Tetrachloride Chloroform Cyclohexanone 1,2-Dichloroethane 1,1-Dichloroethylene Pentachloroethane Ethylbenzene 1,1,1,2- Tetrachloroethane 1,1,2,2- Tetrachloroethane Tetrachloroethylene (PERC) Toluene 1,1,1- Trichloroethane 1,1,2- Trichloroethane Trichloroethylene Xylenes (meta-, ortho-, para-)	75-15-0 56-23-5 67-66-3 108-94-1 107-06-2 75-35-4 76-01-7 100-41-4 630-20-6 79-34-5 127-18-4 108-88-3 71-55-6 79-00-5 79-01-6 1330-20-7 108-38-3 85-47-6 106-42-3	Carbon disulfide is used in many industries as an industrial solvent. It's used to make rubber, viscose rayon, cellophane, and carbon tetrachloride. Some VOCs are used in adhesives, fabric and leather coatings, screen print inks, and synthetic leather. The listed VOCs should not be used in textile auxiliary chemical preparations, or in any kind of spot cleaning or facility cleaning.		Less than: 10 mg/kg	Less than: 10 mg/kg each

THE TOXIC SUBSTANCES CONTROL ACT OF 1976 IS A US FEDERAL LAW (TSCA) – restrictions and assessments

EU/EEA regulated substances relevant to NN products	CAS RN	Latest published: CEN/ISO test methods	NN requirement for suppliers	Lab. indicative limit value (mg/kg)	Legal status
Solvents – 1,4 dioxane	123-91-1	Not yet available	Usage ban	< 100	TSCA assessment
Solvents - NMP (N-methyl-2-pyrrolidone) NEP (N- ethyl-2-pyrrolidine)	872-50-4 (NMP) 2687-91-4 (NEP)	EN ISO 19070:2016 (leather)	Usage ban	< 25	TSCA assessment
Formaldehyde	50-00-0	EN ISO 14184-1:2011(Free and hydrolysed water extracted formaldehyde in textiles) ,EN ISO 14184-2:2011 (formaldehyde emissions from textiles) EN ISO 14184-3:2023 (Free and hydrolysed extracted formaldehyde in textiles using HPLC) EN ISO 17226-1:2021(leather) EN ISO 17226-2:2019 (leather) EN ISO 17226-3:2011(formaldehyde emissions from leather)	Usage ban of compounds so called formaldehyde releasers, that transform into formaldehyde	< 15	TSCA restriction
Hexabromocyclododecan (HBCDD)	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7 and 134237-52-8	EN ISO 17881-1:2016 (textile)	Usage ban	< 20	TSCA assessment

Lead (Pb) and lead salts	7439-92-1 (lead metal) Several	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile) EN 16711-3:2019 (migrated content, textiles) EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	Usage ban	< 10 mg/kg (total content) < 0.1 mg/kg (extractable content)	TSCA restriction
Mercury (Hg)	7439-97-6	EN 16711-1:2015 (total content, textiles) EN 16711-2:2015 (extractable content, textile) EN ISO 17072-1:2019 (extractable content, leather) EN ISO 17072-2:2022 (total content, leather)	Usage ban	< 10 mg/kg (total content) < 0.02 mg/kg (extractable content)	TSCA restriction
2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol also called TBBPA	79-94-7	EN ISO 17881-1:2016 (textile)	Usage ban	< 100	TSCA assessment
Siloxanes (D4, D5 and D6)	556-67-2 (D4) 541-02-6 (D5) 540-97-6 (D6)	Not yet available	Usage ban	< 100	D4 is under TSCA assessment
Halogenated aryl phosphates – TCEP, TBPP, TCPP and TDCPP	115-96-8, 126-72-7, 13674-84-5, 13674-87-8	EN ISO 17881-2:2016 (textile)	Usage ban	< 5	TCEP is under TSCA assessment
Aryl phosphates Trixylyl phosphate, Triphenylphosphate	25155-23-1, 115-86-6	EN ISO 17881-2:2016 (textile)	Usage ban	< 5	Triphenyl Phosphate is under TSCA assessment

REQUIREMENTS FOR COSMETIC PRODUCTS

All cosmetic products produced for NA-KD must comply with the ANNEX II to VI of the Regulation (EC) No 1223/2009 and its amendments. The manufacturer or importer is obligated to ensure that restrictions of substances listed in Annex II to VI of the regulation (EC) No 1223/2009 and its amendments) on cosmetics are considered.