# 2.2 Restricted Substances Manual

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# 1 Introduction

The Restricted Substances Manual refers to all s.Oliver Products like apparel, non-apparel, accessories and all products which do not fall into a category mentioned before. This manual refers also to materials, trimmings, chemicals and other goods needed for the manufacturing of s.Oliver apparel, non-apparel, accessories and other products. This manual is an important part of s. Oliver's product stewardship and environmental program. It has to be provided to everybody, who provides s.Oliver with materials, trimmings, chemicals and other goods.

It is required for every supplier/vendor to declare if materials, trimmings, chemicals and other goods, provided or delivered to s.Oliver, comply with the prohibitions and limitations listed in the Restricted Substances (RS).

# 2 Targets of the s.Oliver RS program

The prolonged discussion concerning the unexpected consequences of an economic and corporate global cross linking like e.g. climate change shows us again and again quite plainly, that mankind cannot act arbitrary on our planet.

s.Oliver recognizes its corporate responsibility in the field of humanity, the environment and its business partners and commits to fair and sustainable business practices. Corporate sustainability implies highly weighted economic, ecologic and social factors therefore it requires concepts to create the consequences of our actions more sustainable. This has to be communicated adequately to our business partners, clients and suppliers/vendors. In a world of global relations and dependences as well as extensive sourcing structures the conception and structured communication of product properties becomes more and more relevant. In the interest of the customer, the environment and the employees involved in the manufacturing s.Oliver strives to ensure that its quality demands can be controlled and retraced at any time.

In textile manufacturing many chemicals are used as additives on the way from the raw material like fiber or textile up to the finished garment. It is essential for the downstream user to have knowledge of these substances to arrange his production processes in an optimized way (environmental protection, workers health and safety). The consumer expects biocompatible garments and accessories. For this compliance with only the minimum legal requirements is not sufficient.

## Conclusions:

- We expect our business partners to comply with minimum social standards as written in our code of conduct.
- We expect that delivered products fully comply with actual laws and regulations concerning product safety and environment.
- In connection with the European Community Regulation REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) it is expected that so-called SVHC`s (substances of very high concern) are not contained in concentrations >0,1 %. If this is still the case s.Oliver has to be informed immediately. The supplier/vendor is responsible for the regular monitoring of the SVHC list (candidate list of Annex XIV of REACH) on the website (http://www.echa.eu ) of the European Chemicals Agency (ECHA). Please also refer to the s.Oliver QGC document "2.3.1 Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)".
- We encourage our business partners, to take a proactive stance in minimizing environmental and product safety risk.
- We strive to avoid the use of PVC.
- Further we strive to avoid the use of hazardous, harmful and environmental hazardous chemicals in general.
- In terms of precautionary principles and the advancement of well being of employees and consumers we strive to avoid disagreeable odour also in sanitary unobjectionable cases.
- We avoid the use of real fur in our products.
- We do not use leather or other material from any endangered or threatened species

## 3 Restricted Substances / Limit Values / Test Methods

A multiplicity of laws and regulations in different countries require the limitation and complete avoidance of certain chemicals. The following tables give an overview which hazardous substances must not be contained or have to keep a certain limit value.

**This binding list summarized by s.Oliver for our supplier/vendor represents a „Best Practice Standard", which does not necessarily comply with all national or international laws as well as regulations in all our distribution and manufacturing countries.**
**It is the sole responsibility of the individual supplier/vendor, that all legal requirements and regulations in those countries are met as well as our best practice standard in current applicable versions.**
**This applies for example in regard to the German BedarfgegenständeVO (Consumer Product Degree), the ChemikalienVO (Ordinance on the usage of chemicals), LFGB (especially §30) etc..**
**Whenever a product may be considered to be a toy or jewellery which will be used by a child, the regulations of the EU directives and the EN 71 have to be taken into account.**
**If any national or international law as well as regulation is not explicitly mentioned it does not release the suppliers/vendors of compliance.**
**Therefore the supplier/vendor hereby gives assurances that the products to be manufactured and supplied shall be manufactured in compliance with all legal regulations and manufactured according to the criteria of this Restricted Substances Manual.**

*We attempt to avoid the use of toxic, harmful and environmental hazardous chemicals in general.*
*This relates to adhesives, finishing chemicals and spot cleaners etc., even if there is no given regulation in chapter 3.*
*We assume such chemicals as toxic, harmful and environmental hazardous chemicals which are subject of the German labelling directives for chemicals.*

- *Toxic and very toxic substances (incl. carcinogenic substances): < 0.1 %*
- *Persistent substances < 0,1 %*
- *Harmful substances < 1 %*

This chapter lists **Limit Values (LV)** for various chemicals and indicates **Methods for Pre-Treatment** and **Testing**. To avoid confusion with units the correlation between ppm (mg/kg) and % is listed in the following table.

| ppm[1)] value | % value | mg/kg[2)] |
|---|---|---|
| 0.01 | 0.000 001 | 0.01 |
| 0.1 | 0.000 01 | 0.1 |
| 1 | 0.000 1 | 1 |
| 10 | 0.001 | 10 |
| 100 | 0.01 | 100 |
| 1 000 | 0.1 | 1 000 |
| 10 000 | 1 | 10 000 |
| 100 000 | 10 | 100 000 |
| 1 000 000 | 100 | 1 000 000 |

[1)] parts per million
[2)] In aqueous solutions mg/kg is very often used equal to mg/l

## 3.1 Restricted Substances List (RSL)

| CAS No. | Substance | Limits<br>Raw Material & Finished Product | Potential Uses<br>Textile Processing for Apparel & Footwear | Suitable Test Method<br>Sample Preparation & Measurement |
|---|---|---|---|---|
| | Acetophenone and 2-Phenyl-2-Propanol | | | |
| 98-86-2 | Acetophenone | 50 ppm each | Potential breakdown products in EVA foam when using dicumyl peroxide as a cross-linking agent. | Extraction in acetone<br>GC/MS, sonication for 30 minutes at 60 degrees C |
| 617-94-7 | 2-Phenyl-2-propanol | | | |
| | Alkylphenol (AP) and Alkylphenol Ethoxylates (APEOs), including all isomers | | | |
| 104-40-5 | Nonylphenol (NP), mixed isomers | Total: 100 ppm | APEOs can be used as or found in detergents, scouring agents, spinning oils, wetting agents, softeners, emulsifying/dispersing agents for dyes and prints, impregnating agents, de-gumming for silk production, dyes and pigment preparations, polyester padding and down/feather fillings.<br>APEOs and formulations containing APEOs are prohibited from use throughout supply chain and manufacturing processes. We acknowledge that residual or trace concentrations of APEOs may still be found at levels exceeding 100 ppm and that more time is necessary for the supply chain to phase them out completely. This limit reflects anticipated EU legislation and was set to provide suppliers with advance warning and direction for continuous improvement. | Textile: EN ISO 18254-1: 2016, determination of AP using LC/MS or GC/MS<br>Leather: EN ISO 18218-1:2015 |
| 11066-49-2 | | | | |
| 25154-52-3 | | | | |
| 84852-15-3 | | | | |
| 140-66-9 | Octylphenol (OP), mixed isomers | | | |
| 1806-26-4 | | | | |
| 27193-28-8 | | | | |
| 9002-93-1 | Octylphenol ethoxylates (OPEOs) | Total: 100 ppm | | |
| 9036-19-5 | | | | |
| 68987-90-6 | | | | |
| 9016-45-9 | Nonylphenol ethoxylates (NPEOs) | | | |
| 26027-38-3 | | | | |
| 37205-87-1 | | | | |
| 68412-54-4 | | | | |
| 127087-87-0 | | | | |

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|---|---|---|---|---|
| | Azo-amines | | | |
| 92-67-1 | 4-Aminobiphenyl | 20 ppm each | Azo dyes and pigments are colourants 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 cleavable amines are restricted. Azo dyes that release these amines are regulated and should no longer be used for dyeing of textiles. | Textile: (EU): prEN ISO 14362-1:2015<br>Leather: (EU): CEN ISO/TS 17234-1:2015<br>p-Aminoazobenzene:<br>Textile: EN 14362-3:2015<br>Leather: 17234-2:2011 |
| 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-Chloroaniline | | | |
| 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-chloroaniline) | | | |
| 101-80-4 | 4,4'-Oxydianiline | | | |
| 139-65-1 | 4,4'-Thiodianiline | | | |
| 95-53-4 | o-Toluidine | | | |
| 95-80-7 | 2,4-Toluylendiamine | | | |
| 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) | | | |
| 60-09-3 | p-Aminoazobenzene | | | |
| | Bisphenol-A | | | |
| 80-05-7 | Bisphenol-A (BPA) | 1 ppm | Used in the production of epoxy resins, polycarbonate plastics, flame retardants and PVC.<br>Prohibited from use in food and drink containers, and items intended to come into contact with oral cavity. | Sample preparation:<br>Extraction: 1 g sample/20 ml methanol, sonication for 60 minutes at 70°C.<br>Measurement:<br>DIN EN ISO 18857-2 (mod) |

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| | **Chlorinated Paraffins** | | | |
| 85535-84-8 | Short-chain chlorinated Paraffins (SCCP) (C10-C13) | 1000 ppm | May be used as flame retardants or as fat liquoring agents in leather production. They also can be used as plasticizers. | EN ISO 18219:2016 |
| 85535-85-9 | Medium-chain chlorinated Paraffins (MCCP) (C14-C17) | 1000 ppm | | |
| | **Chlorophenols** | | | |
| 15950-66-0 | 2,3,4-Trichlorophenol | 0.5 ppm each | Chlorophenols are polychlorinated compounds used as preservatives or pesticides. Pentachlorophenol (PCP) and tetrachlorophenol (TeCP) are sometimes used to prevent mold and kill insects when growing cotton and when storing/transporting fabrics. PCP and TeCP can also be used as preservatives in print pastes. | 1 M KOH extraction, 12-15 hours at 90 °C, derivatization and analysis § 64 LFGB B 82.02-08 or DIN EN ISO 17070:2015 |
| 933-78-8 | 2,3,5-Trichlorophenol | | | |
| 933-75-5 | 2,3,6-Trichlorophenol | | | |
| 95-95-4 | 2,4,5-Trichlorophenol | | | |
| 88-06-2 | 2,4,6-Trichlorophenol | | | |
| 609-19-8 | 3,4,5-Trichlorophenol | | | |
| 4901-51-3 | 2,3,4,5-Tetrachlorophenol (TeCP) | | | |
| 58-90-2 | 2,3,4,6-Tetrachlorophenol (TeCP) | | | |
| 935-95-5 | 2,3,5,6-Tetrachlorophenol (TeCP) | | | |
| 87-86-5 | Pentachlorophenol (PCP) | | | |

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| | Chlororganic Carriers | | | |
| 95-49-8 | 2-Chlorotoluene | Total: 1 ppm | Chlorobenzenes and 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. | DIN 54232:2010 |
| 108-41-8 | 3-Chlorotoluene | | | |
| 106-43-4 | 4-Chlorotoluene | | | |
| 32768-54-0 | 2,3-Dichlorotoluene | | | |
| 95-73-8 | 2,4-Dichlorotoluene | | | |
| 19398-61-9 | 2,5-Dichlorotoluene | | | |
| 118-69-4 | 2,6-Dichlorotoluene | | | |
| 95-75-0 | 3,4-Dichlorotoluene | | | |
| 2077-46-5 | 2,3,6-Trichlorotoluene | | | |
| 6639-30-1 | 2,4,5-Trichlorotoluene | | | |
| 76057-12-0 | 2,3,4,5-Tetrachlorotoluene | | | |
| 875-40-1 | 2,3,5,6-Tetrachlorotoluene | | | |
| 877-11-2 | Pentachlorotoluene | | | |
| 541-73-1 | 1,3-Dichlorobenzene | | | |
| 106-46-7 | 1,4-Dichlorobenzene | | | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | | |
| 108-70-3 | 1,3,5-Trichlorobenzene | | | |
| 634-66-2 | 1,2,3,4-Tetrachlorobenzene | | | |
| 634-90-2 | 1,2,3,5-Tetrachlorobenzene | | | |
| 95-94-3 | 1,2,4,5-Tetrachlorobenzene | | | |
| 608-93-5 | Pentachlorobenzene | | | |
| 118-74-1 | Hexachlorobenzene | | | |
| 95-50-1 | 1,2-Dichlorobenzene | 10 ppm | | |
| | Dimethylformamide | | | |
| 68-12-2 | Dimethylformamide (DMFa) | 500 ppm | DMFa is a solvent used in plastics, rubber, and polyurethane (PU) coating. Water-based PU does not contain DMFa and is therefore preferable. | DIN CEN ISO/TS 16189:2013 |
| | Dimethylfumarate | | | |
| 624-49-7 | Dimethylfumarate (DMFu) | 0.1 ppm | DMFu is an anti-mold agent used in sachets in packaging to prevent the buildup of mold, especially during shipping. | CEN ISO/TS 16186:2012 |

| | Dyes, Forbidden and Disperse | | | |
|---|---|---|---|---|
| 2475-45-8 | C.I. Disperse Blue 1 | 75 ppm each | Disperse dyes are a class of water-insoluble dyes that penetrate the fibre system of synthetic or manufactured fibres and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fibre (e.g., polyester, acetate, polyamide).<br>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles. | DIN 54231:2005 |
| 2475-46-9 | C.I. Disperse Blue 3 | | | |
| 3179-90-6 | C.I. Disperse Blue 7 | | | |
| 3860-63-7 | C.I. Disperse Blue 26 | | | |
| 12222-75-2 | C.I. Disperse Blue 35 | | | |
| 12222-97-8 | C.I. Disperse Blue 102 | | | |
| 12223-01-7 | C.I. Disperse Blue 106 | | | |
| 61951-51-7 | C.I. Disperse Blue 124 | | | |
| 23355-64-8 | C.I. Disperse Brown 1 | | | |
| 2581-69-3 | C.I. Disperse Orange 1 | | | |
| 730-40-5 | C.I. Disperse Orange 3 | | | |
| 82-28-0 | C.I. Disperse Orange 11 | | | |
| 12223-33-5 | C.I. Disperse Orange 37/76/59 | | | |
| 13301-61-6 | | | | |
| 51811-42-8 | | | | |
| 85136-74-9 | C.I. Disperse Orange 149 | | | |
| 2872-52-8 | C.I. Disperse Red 1 | | | |
| 2872-48-2 | C.I. Disperse Red 11 | | | |
| 3179-89-3 | C.I. Disperse Red 17 | | | |
| 61968-47-6 | C.I. Disperse Red 151 | | | |
| 119-15-3 | C.I. Disperse Yellow 1 | | | |
| 2832-40-8 | C.I. Disperse Yellow 3 | | | |
| 6300-37-4 | C.I. Disperse Yellow 7 | | | |
| 6373-73-5 | C.I. Disperse Yellow 9 | | | |
| 6250-23-3 | C.I. Disperse Yellow 23 | | | |
| 12236-29-2 | C.I. Disperse Yellow 39 | | | |
| 54824-37-2 | C.I. Disperse Yellow 49 | | | |
| 54077-16-6 | C.I. Disperse Yellow 56 | | | |
| 3761-53-3 | C.I. Acid Red 26 | | | |
| 569-61-9 | C.I. Basic Red 9 | | | |
| 569-64-2 | C.I. Basic Green 4 | | | |
| 2437-29-8 | | | | |
| 10309-95-2 | | | | |

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|---|---|---|---|---|
| 548-62-9 | C.I. Basic Violet 3 | 75 ppm each | Disperse dyes are a class of water-insoluble dyes that penetrate the fibre system of synthetic or manufactured fibres and are held in place by physical forces without forming chemical bonds. Disperse dyes are used in synthetic fibre (e.g., polyester, acetate, polyamide).<br>Restricted disperse dyes are suspected of causing allergic reactions and are prohibited from use for dyeing of textiles. | |
| 632-99-5 | C.I. Basic Violet 14 | | | |
| 2580-56-5 | C.I. Basic Blue 26 | | | |
| 1937-37-7 | C.I. Direct Black 38 | | | |
| 2602-46-2 | C.I. Direct Blue 6 | | | |
| 573-58-0 | C.I. Direct Red 28 | | | |
| 16071-86-6 | C.I. Direct Brown 95 | | | |
| 60-11-7 | 4-Dimethylaminoazobenzene (Solvent Yellow 2) | | | |
| 6786-83-0 | C.I. Solvent Blue 4 | | | |
| 561-41-1 | 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol | | | |
| | Dyes, Navy Blue | | | |
| 118685-33-9 | Component 1: C39H23ClCrN7O12S·2Na | 75 ppm each | Navy blue colourants are regulated and are prohibited from use for dyeing of textiles.<br>(Index 611-070-00-2) | DIN 54231:2005 |
| Not allocated | Component 2: C46H30CrN10O20S2·3Na | | | |
| | Flame Retardants | | | |
| 126-72-7 | Tris(2,3,-dibromopropyl) phosphate (TRIS) | Total: 5 ppm | Flame-retardant chemicals are rarely used to meet flammability requirements in children's clothing and adult products. They should no longer be used in apparel and footwear. | Methanol extraction, GC/MS |
| 545-55-1 | Tris(1-aziridinyl)phosphine oxide) (TEPA) | | | LC-MS |
| 32534-81-9 | Pentabromodiphenyl ether (PentaBDE) | | | Acetonitril extraction, LC-DAD-MS, and confirmation with GC/MS |
| 32536-52-0 | Octabromodiphenyl ether (OctaBDE) | | | |
| 1163-19-5 | Decabromodiphenyl ether (DecaBDE) | | | |
| 79-94-7 | Tetrabromobisphenol A (TBBP A) | | | |
| 115-96-8 | Tris(2-chloroethyl)phosphate (TCEP) | | | Methanol extraction, GC/MS |
| 59536-65-1 | Polybromobiphenyls (PBB) | | | |
| 5412-25-9 | Bis(2,3-dibromopropyl) phosphate (BDBPP) | | | |
| 3194-55-6 | Hexabromocyclododecane (HBCDD) | | | |
| 3296-90-0 | 2,2-bis(bromomethyl)-1,3-propanediol (BBMP) | | | |
| 13674-87-8 | Tris(1,3-dichloro-isopropyl) phosphate (TDCPP) | | | |
| 25155-23-1 | Trixylyl phosphate (TXP) | | | |

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|---|---|---|---|---|
| | Fluorinated Greenhouse Gases | | | |
| Various | See Regulation (EC) No 842/2006 for a complete list. | 0.1 ppm each | | Sample preparation:<br>Purge and trap — thermal desorption or SPME<br>Measurement: GC/MS |
| | Formaldehyde | | | |
| 50-00-0 | Formaldehyde | Adults and children: 75 ppm<br>Babies: 16 ppm | Used in textiles as an anti-creasing and anti-shrinking agent. It is also often used in polymeric resins. | Textile:<br>JIS L 1041-1983 A (Japan Law 112) or EN ISO 14184-1:2011<br>Leather: ISO 17226-2:2008 with ISO 17226-1:2008 confirmation method in case of interferences. |
| | Heavy Metals | | | |
| 7440-36-0 | Antimony (Sb) | Extractable: 30 ppm | Found in or used as a catalyst in polymerisation of polyester, flame retardants, fixing agents, pigments and alloys. | Sample preparation:<br>EN ISO 105-E04:2013<br>Measurement:<br>EN ISO 17294-2:2014 |
| 7440-38-2 | Arsenic (As) | Extractable: 0.2 ppm<br>Total: 100 ppm | Arsenic and its compounds can be used in preservatives, pesticides and defoliants for cotton, synthetic fibers, paints, inks, trims and plastics. | Sample preparation:<br>Extractable:<br>Textiles: EN ISO 105-E04:2013<br>Leather: DIN EN ISO 17072-1:2014<br>Total: Microwave digestion with H2O2/HNO3<br>Measurement:<br>EN ISO 17294-2 :2014 |
| 7440-39-3 | Barium (Ba) | Extractable:<br>1000 ppm | Barium and its compounds can be used in pigments for inks, plastics, surface coatings, as well as in dyeing, mordant, filler in plastics, textile finish, and leather tanning. | Sample preparation:<br>Extractable:<br>Textiles: EN ISO 105-E04:2013<br>Leather: DIN EN ISO 17072-1:2014<br>Measurement:<br>EN ISO 17294-2 :2014 |
| 7440-43-9 | Cadmium (Cd) | Extractable: 0.1 ppm<br>Total:<br>Adults: 75 ppm<br>Children and babies: 40 ppm | Cadmium compounds are used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides and paints.<br>The total limit for all will be reduced to 40 ppm in a future update. | Sample preparation:<br>Extractable:<br>Textiles: EN ISO 105-E04:2013<br>Leather: DIN EN ISO 17072-1:2014<br>Total: Microwave digestion with H2O2/HNO3<br>Measurement:<br>EN ISO 17294-2:2014 |

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|---|---|---|---|---|
| 7440-47-3 | Chromium (Cr) | Extractable for textiles: 1 ppm<br>Leather footwear for babies:<br>60 ppm | Chromium compounds can be used as dyeing additives, dye-fixing agents, colour fastness after-treatments, dyes for wool, silk and polyamide (especially dark shades) and leather tanning. | Sample preparation:<br>EN ISO 105-E04:2013<br>Measurement:<br>EN ISO 17294-2:2014 |
| 18540-29-9 | Chromium VI | Extractable:<br>Leather: 3ppm<br>Knitted textiles for babies:<br>0.5 ppm | Though typically associated with leather tanning, Chromium VI also may be used in the dyeing of wool (after the chroming process). | Sample preparation:<br>Textile: EN ISO 105-E04:2013<br>Leather ageing: Conditions for leather ageing: 24 hours, 80 degrees C, maximum 5% relative humidity, no ventilation; EN 17075-1:2015<br>Measurement:<br>Textile: EN ISO 17294-2<br>Leather: EN 17075-1:2015 |
| 7440-48-4 | Cobalt (Co) | Extractable: 1 ppm | Cobalt and its compounds can be used in alloys, pigments, dyestuff, and the production of plastic buttons. | Sample preparation:<br>EN ISO 105-E04:2013<br>Measurement: EN ISO 17294-2 |
| 7440-50-8 | Copper (Cu) | Extractable: 25 ppm | Copper and its compounds can be found in alloys and pigments, and in textiles as an antimicrobial agent. | Sample preparation:<br>EN ISO 105-E04:2013<br>Measurement:<br>EN ISO 17294-2:2014 |
| 7439-92-1 | Lead (Pb) | Extractable:<br>Adults and children: 1 ppm<br>Babies: 0.2 ppm<br>Total: 90 ppm | May be associated with plastics, paints, inks, pigments and surface coatings. | Sample preparation:<br>Extractable:<br>EN ISO 105-E04:2013<br>Total: Microwave digestion with H202/HNO3<br>Lead in paint and surface coating: CPSIA Section 101 16 CFR 1303<br>Measurement:<br>EN ISO 17294-2:2014 |
| 7439-97-6 | Mercury (Hg) | Extractable: 0.02 ppm<br>Total: 0.5 ppm | Mercury compounds can be present in pesticides and as contaminants in caustic soda (NaOH). They may also be used<br>in paints. | Sample preparation:<br>Extractrable: EN ISO 105-E04:2013<br>Total: Microwave digestion with H202/HNO3<br>Measurement:<br>EN ISO 17294-2:2014 |

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|---|---|---|---|---|
| 7440-02-0 | Nickel (Ni) | Extractable: 1 ppm<br>Release:<br>Prolonged skin contact:<br>0.5 µg/cm²/week<br>Pierced part: 0.2 µg/cm²/week | 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. | Sample preparation:<br>Textile: EN ISO 105-E04:2013<br>Metal parts:<br>EN 12472:2005+ A1:2009<br>Measurement:<br>Textile: EN ISO 17294-2:2014<br>Metal parts: EN 1811:2015 |
| 7782-49-2 | Selenium (Se) | Extractable: 500 ppm | May be found in synthetic fibres, paints, inks, plastics and metal trims. | Sample preparation:<br>EN ISO 105-E04:2013<br>Measurement:<br>EN ISO 17294-2:2014 |
| | Monomers | | | |
| 100-42-5 | Styrene | 500 ppm | Styrene is a precursor for polymerization and may be present in various styrene-copolymers like plastic buttons. | 120 degrees C for one hour headspace solvent extraction GC-MS; Methanol extraction at 60 degrees C |
| | N-Nitrosamines | | | |
| 62-75-9 | N-nitrosodimethylamine (NDMA) | 0.5 ppm each | Can be formed as by-product in the production of rubber. | GB/T 24153-2009: determination using GC/MS or LC/MS/MS |
| 55-18-5 | N-nitrosodiethylamine (NDEA) | | | |
| 621-64-7 | N-nitrosodipropylamine (NDPA) | | | |
| 924-16-3 | N-nitrosodibutylamine (NDBA) | | | |
| 100-75-4 | N-nitrosopiperidine (NPIP) | | | |
| 930-55-2 | N-nitrosopyrrolidine (NPYR) | | | |
| 59-89-2 | N-nitrosomorpholine (NMOR) | | | |
| 614-00-6 | N-nitroso N-methyl N-phenylamine (NMPhA) | | | |
| 612-64-6 | N-nitroso N-ethyl N-phenylamine (NEPhA) | | | |
| | Organotin Compounds | | | |
| Various | Dibutyltin (DBT) | 1 ppm each | Class of chemicals combining tin and organics such as butyl and phenyl groups. Organotins are predominantly found in the environment as antifoulants in marine paints, but they can also be used as biocides (e.g., antibacterials), catalysts in plastic and glue production, and heat stabilizers in plastics/rubber. In textiles and apparel, organotins are associated with plastics/rubber, inks, paints, metallic glitter, polyurethane products and heat transfer material. | CEN ISO/TS 16179: 2012 |
| Various | Dioctyltin (DOT) | | | |
| Various | Monobutyltin (MBT) | | | |
| Various | Tributyltin (TBT) | 0.5 ppm each | | |
| Various | Triphenyltin (TPhT) | | | |
| Various | All tri-substituted Organotin compounds | 1 ppm each | | |

| | | | | |
|---|---|---|---|---|
| | **Ortho-phenylphenol** | | | |
| 90-43-7 | Ortho-phenylphenol (OPP) | 1000 ppm | OPP can be used for its preservative properties in leather or as a carrier in dyeing processes. | Sample Preparation:<br>§64 BVL B 82.02.08<br>Measurement:<br>GC-MS, LC-MS for confirmation |
| | **Ozone-depleting Substances** | | | |
| Various | See Regulation (EC) No 1005/2009 for a complete list. | | Ozone-depleting substances are prohibited from use. | GC/MS headspace 120°C for 45 minutes |
| | **Perfluorinated and Polyfluorinated Chemicals (PFCs)** | | | |
| 2795-39-3 | Perfluorooctane Sulfonate (PFOS) | 1 µg/m² each | PFOA and PFOS may be present as unintended byproducts in long-chain commercial water, oil and stain repellent agents. PFOA may also be used in polymers like polytetrafluoroethylene (PTFE) | CEN/TS 15968:2014 |
| 3825-26-1 | Perfluorooctanoic Acid (PFOA) and its salts and esters | | | |
| | **Pesticides, Agricultural** | | | |
| Various | See Appendix A for a complete list. | 0.5 ppm each | May be found in natural fibres, primarily cotton. | ISO 15913/DIN 38407 F2 or<br>EPA 8081/EPA 8151A or<br>BVL L 00.00-34:2010-09 |
| | **pH** | | | |
| | pH-Value | 4.0 ≤ pH ≤ 7.5<br>Leather:<br>3.5 ≤ pH ≤ 7.5 | | Non-Leather: DIN EN ISO 3071; Extraction in potassium chloride<br>Leather: DIN EN ISO 4045, Extraction in water |

| | Phthalates | | | |
|---|---|---|---|---|
| 28553-12-0 | Di-Iso-nonylphthalate (DINP) | 500 ppm each<br>Total: 1000 ppm | Esters of ortho-phthalic acid (phthalates) are a class of organic compound commonly added to plastics to increase flexibility. They are sometimes used to facilitate the moulding of plastic by decreasing its melting temperature.<br>Phthalates can be found in:<br>Flexible plastic components (e.g., PVC)<br>Print pastes<br>Adhesives<br>Plastic buttons<br>Plastic sleevings<br>Polymeric coatings<br><br>The listed phthalates are those most commonly used across industry sectors. Find more information about phthalates restricted by legislation in the REACH SVHC list, which is updated frequently. | Sample preparation:<br>CPSC-CH-C1001-09.3<br>Measurement:<br>Textile:<br>GC-MS, EN ISO 14389:2014<br>Leather:<br>GC-MS |
| 117-84-0 | Di-n-octylphthalate (DNOP) | | | |
| 117-81-7 | Di(2-ethylhexyl)-phthalate (DEHP) | | | |
| 26761-40-0 | Diisodecylphthalate (DIDP) | | | |
| 85-68-7 | Butylbenzylphthalate (BBP) | | | |
| 84-74-2 | Dibutylphthalate (DBP) | | | |
| 84-69-5 | Diisobutylphthalate (DIBP) | | | |
| 68515-42-4 | Di(C7-C11 alkyl) phthalate (DHNUP), linear + branched | | | |
| 71888-89-6 | Di(C6-C8 alkyl) phthalate (DIHP), branched, C7 rich | | | |
| 117-82-8 | Di(2-methoxyethyl) phthalate (DMEP) | | | |
| 84-75-3 | Di-n-hexylphthalate (DnHP) | | | |
| 84-66-2 | Diethylphthalate (DEP) | | | |
| 605-50-5 | Diisopentylphthalate (DIPP) | | | |
| 776297-69-9 | n-Pentylisopentylphthalate (NPIPP) | | | |
| 131-18-0 | Di-n-pentylphthalate (DPP) | | | |
| 68515-50-4 | Dihexylphthalate, branched + linear | | | |
| 131-11-3 | Dimethylphthalate (DMP) | | | |
| 84777-06-0 | 1,2-Benzenedicarboxylic acid, dipentylester, branched + linear | | | |

| | | | | | |
|---|---|---|---|---|---|
| | Polycyclic Aromatic Hydrocarbons (PAHs) | | | | |
| 83-32-9 | Acenaphthene | No individual restriction | Total: 10 ppm | PAHs are natural components of crude oil and are common residues from oil refining. PAHs have a characteristic smell similar to that of car tires or asphalt. Oil residues containing PAHs are added to rubber and plastics as a softener or extender and may be found in rubber, plastics, lacquers and coatings. PAHs are often found in the outsoles of footwear and in printing pastes for screen prints. PAHs can be present as impurities in Carbon Black. They also may be formed from thermal decomposition of recycled materials during reprocessing<br><br>**Naphthalene: Dispersing agents for textile dyes may contain high residual naphthalene concentrations due to the use of low-quality naphthalene derivatives (e.g., poor-quality naphthalene sulphonate formaldehyde condensation products). | AFPS GS 2014 |
| 208-96-8 | Acenaphthylene | | | | |
| 120-12-7 | Anthracene | | | | |
| 191-24-2 | Benzo(g,h,i)perylene | | | | |
| 86-73-7 | Fluorene | | | | |
| 206-44-0 | Fluoranthene | | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | | | | |
| 91-20-3 | Naphthalene** | | | | |
| 85-01-8 | Phenanthrene | | | | |
| 129-00-0 | Pyrene | | | | |
| 56-55-3 | Benzo(a)anthracene | 1 ppm each<br>Child care articles: 0.5 ppm each | | | |
| 50-32-8 | Benzo(a)pyrene | | | | |
| 205-99-2 | Benzo(b)fluoranthene | | | | |
| 192-97-2 | Benzo[e]pyrene | | | | |
| 205-82-3 | Benzo[j]fluoranthene | | | | |
| 207-08-9 | Benzo(k)fluoranthene | | | | |
| 218-01-9 | Chrysene | | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | | | | |
| | Polyvinylchloride | | | | |
| 9002-86-2 | PVC | Not detectable | | | Burning Test by Beilstein Method / FT-IR |

| | Volatile Organic Compounds (VOCs) | | | |
|---|---|---|---|---|
| 71-43-2 | Benzene | 5 ppm | These VOCs should not be used in textile auxiliary chemical preparations. They are also associated with solvent-based processes such as solvent-based polyurethane coatings and glues/adhesives. They should not be used for any kind of facility cleaning or spot cleaning. | For general VOC screening: GC/MS headspace 45 minutes at 120 degrees C<br>For DMAC: DIN CEN ISO/TS 16189:2013 |
| 56-23-5 | Carbon tetrachloride | Total: 1000 ppm | | |
| 67-66-3 | Chloroform | | | |
| 107-06-2 | 1,2-Dichloroethane | | | |
| 75-35-4 | 1,1-Dichloroethylene | | | |
| 127-19-5 | Dimethylacetamide (DMAC) | | | |
| 76-01-7 | Pentachloroethane | | | |
| 630-20-6 | 1,1,1,2- Tetrachloroethane | | | |
| 79-34-5 | 1,1,2,2- Tetrachloroethane | | | |
| 127-18-4 | Tetrachloroethylene (PER) | | | |
| 108-88-3 | Toluene | | | |
| 71-55-6 | 1,1,1- Trichloroethane | | | |
| 79-00-5 | 1,1,2- Trichloroethane | | | |
| 79-01-6 | Trichloroethylene | | | |
| 1330-20-7 | Xylenes (meta-, ortho-, para-) | | | |

**The size classification for babies is for size ≤ 30 for shoes and ≤ 140 for textiles**

## 3.2 Appendix A: Pesticides, Agricultural

| CAS No. | Pesticide Name | CAS No. | Pesticide Name | CAS No. | Pesticide Name |
|---|---|---|---|---|---|
| 93-72-1 | 2-(2,4,5-trichlorophenoxy) propionic acid, its salts and compounds | | | 118-74-1 | Hexachlorobenzene |
| 93-76-5 | 2,4,5-T | 115-32-2 | Dicofol | 465-73-6 | Isodrine |
| 93-72-1 | 2,4,5-TP | 141-66-2 | Dicrotophos | 4234-79-1 | Kelevane |
| 94-75-7 | 2,4-D | 60-57-1 | Dieldrine | 143-50-0 | Kepone |
| 309-00-2 | Aldrine | 60-51-5 | Dimethoate | 7784-40-9 | Lead hydrogen arsenate |
| 86-50-0 | Azinophosmethyl | 88-85-7 | Dinoseb, its salts and acetate | 58-89-9 | Lindane |
| 2642-71-9 | Azinophosethyl | 57648-21-2 | DTTB (Timiperone) | 121-75-5 | Malathione |
| 4824-78-6 | Bromophos-ethyl | 115-29-7 | Endosulfan | 94-74-6 | MCPA |
| 2425-06-1 | Captafol | 959-98-8 | Endosulfan I (alpha) | 94-81-5 | MCPB |
| 63-25-2 | Carbaryl | 33213-65-9 | Endosulfan II (beta) | 93-65-2 | Mecoprop |
| 510-15-6 | Chlorbenzilat | 72-20-8 | Endrine | 10265-92-6 | Metamidophos |
| 57-74-9 | Chlordane | 66230-04-4 | Esfenvalerate | 72-43-5 | Methoxychlor |
| 6164-98-3 | Chlordimeform | 106-93-4 | Ethylendibromid | 2385-85-5 | Mirex |
| 470-90-6 | Chlorfenvinphos | 56-38-2 | Ethylparathione | 6923-22-4 | Monocrotophos |
| 1897-45-6 | Chlorthalonil | 51630-58-1 | Fenvalerate | 56-38-2 | Parathion |
| 56-72-4 | Coumaphos | 1336-36-3 | Halogenated biphenyls, including Polychlorinatedbiphenyl (PCB) | 298-00-0 | Parathion-methyl |
| 68359-37-5 | Cyfluthrin | 53469-21-9 | | 608-90-2 | Pentabromobenzene |
| 91465-08-6 | Cyhalothrin | Various | | 1825-21-4 | Pentachloroanisole |
| 52315-07-8 | Cypermethrin | Various | Halogenated terphenols, including polychlorinated terphenyl (PCT) | 52645-53-1 | Permethrine |
| 78-48-8 | S,S,S-Tributyl phosphorotrithioate (Tribufos) | Various | Halogenated naphthalenes, including polychlorinated naphthalenes (PCNs) | 7786-34-7 | Phosdrin/Mevinphos |
| 52918-63-5 | Deltamethrin | Various | Halogenated diarylalkanes | 72-56-0 | Perthane |
| 53-19-0 | DDD | 99688-47-8 | Halogenated diphenyl methanes, including Monomethyl-dibromo-diphenyl methane, Monomethyl-dichloro-diphenyl methane, and Monomethyl-tetrachloro-diphenyl methane | 31218-83-4 | Propethamphos |
| 72-54-8 | | 81161-70-8 | | 41198-08-7 | Profenophos |
| 3424-82-6 | DDE | 76253-60-6 | | 13593-03-8 | Quinalphos |
| 72-55-9 | | 76-44-8 | Heptachlor | 82-68-8 | Quintozene |
| 50-29-3 | DDT | 1024-57-3 | Heptachloroepoxide | 8001-50-1 | Strobane |
| 789-02-6 | | 36355-01-8 | Hexabromobiphenyl | 297-78-9 | Telodrine |
| 333-41-5 | Diazinone | 319-84-6 | a-Hexachlorocyclohexane with and without Lindane | 8001-35-2 | Toxaphene |
| 1085-98-9 | Dichlofluanide | 319-85-7 | b-Hexachlorocyclohexane with and without Lindane | 731-27-1 | Tolylfluanide |
| 120-36-5 | Dichloroprop | 319-86-8 | g-Hexachlorocyclohexane with and without Lindane | 1582-09-8 | Trifluraline |

## 4 Which test for which material?

Based on our experience the following tables give recommendations that help to decide in which cases parameters are of particular relevance. In these cases, tests are highly recommended. It must be pointed out that these recommendations (including the case that a special material or component is not mentioned), do not release the supplier/vendor from his responsibility to comply with the requirements of the Restricted Substances as well as all relevant local and national laws and regulations in all cases for all materials and all parameters.

## 4.1 Textile fibres / Artificial leather / Leather / Miscellaneous / Packaging

| Test parameters | Natural Fibres (include animal, plants and modified e.g. viscose) | Synthetic Fibres or blended Fibers | Artificial Leather with Fibre Backing | Natural Leather | Coatings and Prints | Natural materials (include horns, bones, cork, wood, paper, straw) | Plastics | Metal | Foams | Feathers | Glue | Packaging |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkylphenolethoxylates (APEOs) | C | C | C | C | | O | | | | C | | |
| Azo-amines | C | C | C | C | C | C[1)] | | | C[2)] | C[1)] | | |
| Short-chain chlorinated Paraffins (SCCP) (C10-C13) | | | O | C | O | | O | | | | | |
| Medium-chain chlorinated Paraffins (MCCP) (C14-C17) | | | O | O | O | | O | | | | | |
| PCP | C | | | C | | C | | | | C | | |
| Chlorophenols (Tri-; Tetrachlorphenols & Ortho-phenylphenol) | O | | | O | | O | | | | O | | |
| Chlororganic Carriers | | O | | | | | | | | | | |
| Dimethylformamide (DMFa) | | | O | | | | | | | | | |
| Dimethylfumarate (DMFu) | | | | O | | | | | | | | |
| Dyes, Forbidden and Disperse | | C | | | | | | | | | | |
| Flame Retardants | Flame Retardants finishes | | | | | | | | | | | |
| Formaldehyde | O | O | O | O | C | C | | | | | C | |
| Heavy Metals, Chromium VI | | | | C | | | | | | | | |
| Heavy Metals, Nickel Release | | | | | | | | C | | | | |
| Heavy Metals, Cadmium Total | | | O | | O | | C | O | | | | |
| Heavy Metals, Lead Total | | | O | | O | | O | C | | | | |
| Heavy Metals, Extractable | O | O | O | O | O | | O | O | | | | |
| Organotin Compounds | | | O | | O | | O | | | | | |
| Perfluorinated and Polyfluorinated Chemicals (PFCs) | Water-repellent finishes | | | | | | | | | | | |
| Phthalates: DINP, DNOP, DEHP, DIDP, BBP, DBP, DIBP | | | C | | C | | C | | | | C | |
| Phthalates additional | | | O | | O | | O | | | | O | |
| Polycyclic Aromatic Hydrocarbons (PAHs) | | | O | | | | O | | | | | |
| PVC | | | O | | O | | O | | | | | |
| Total content (Pb, Cd, Cr-VI, Hg) acc. to Packaging Directive | | | | | | | | | | | | C |

1) only needed "if coloured" (describes natural materials which are coloured due to a dyeing process) or plastic items, which have a coating/print, if solid dyed no test needed.
2) Push up, padded bras, beachwear etc. whenever a PU foam is used!

**Remarks:**
Core (C) (Mandatory) test is in Yellow / Optional (O) (Recommended) test is in Green
A material can be defined as blended fibre if the percentage of synthetic fibres, in regard to the complete material composition, is higher than 5%.
**Please strongly consider, whenever a finishing like garment dye or garment wash etc. is conducted, the already performed tests have to be repeated if necessary.**
**Whenever a product may be considered to be a toy or jewellery which will be used by a child, the regulations of the EU directives and the EN 71 have to be taken into account.**
If one material or component is not mentioned, please follow test instruction of "Textile fibers or Artificial leather / Leather, or contact s.Oliver Germany directly for a test recommendation

### 4.1.1 Jewellery

**The following instructions only relates to "Jewellery" like earrings, necklaces, wristbands, hair circlets, hair clips etc..**

All examples serve only as recommendations based on our experience. The supplier/vendor is responsible for the correct implementation of our Restricted Substances Manual and the relevant regional, national and international regulations which affect his business activities.

- All materials which have a direct and continuous skin contact have to be considered as "prolonged skin contact" and shall be tested!
- Please send at least 4 pieces of the ready made style to the laboratory or each component separately as raw material.

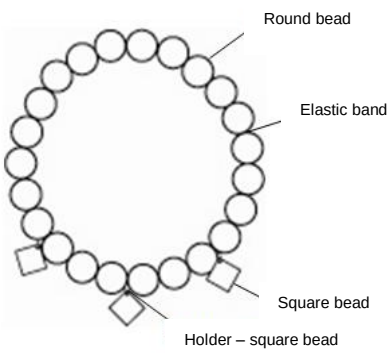
#### 4.1.1.1 Toolkit: Product example - bracelet

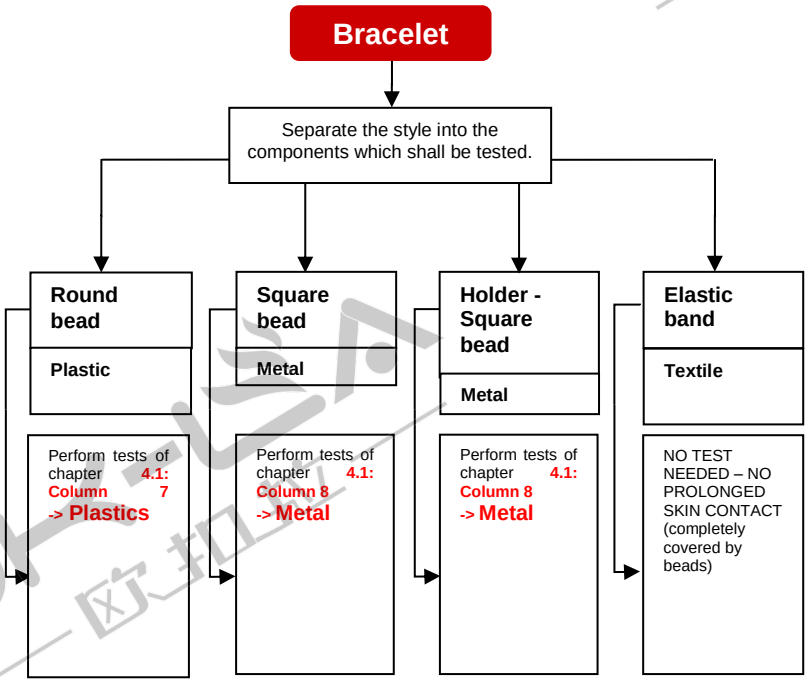
The following tool will explain the general systematic to select the recommended restricted substances as well as the instruction, how a style can be separated into the components which shall be tested (4.1 Textile fibres / Artificial leather / Leather / Miscellaneous / Packaging).

The laboratories will need the information if the test results shall be assessed due to the category **babies/ children or adult.**

| | Round bead | Square bead | Holder - Square bead | Elastic band |
|---|---|---|---|---|
| **Material composition** | Solid dyed plastic | Metal | Metal | Elastic band (not coloured) |

**In general all components of a style have to comply with the regulations of the s.Oliver restricted substances manual, even if this product example will not explain each possible component separately.**



# 5 Toolkit

This Restricted Substances Toolkit shall help to select the recommended tests and shall be a practical tool to understand the systematic of the test selection.

**All examples serve only as recommendations based on our experience. The supplier/vendor is responsible for the correct implementation of our Restricted Substances Manual and the relevant regional, national and international regulations which affect his business activities.**

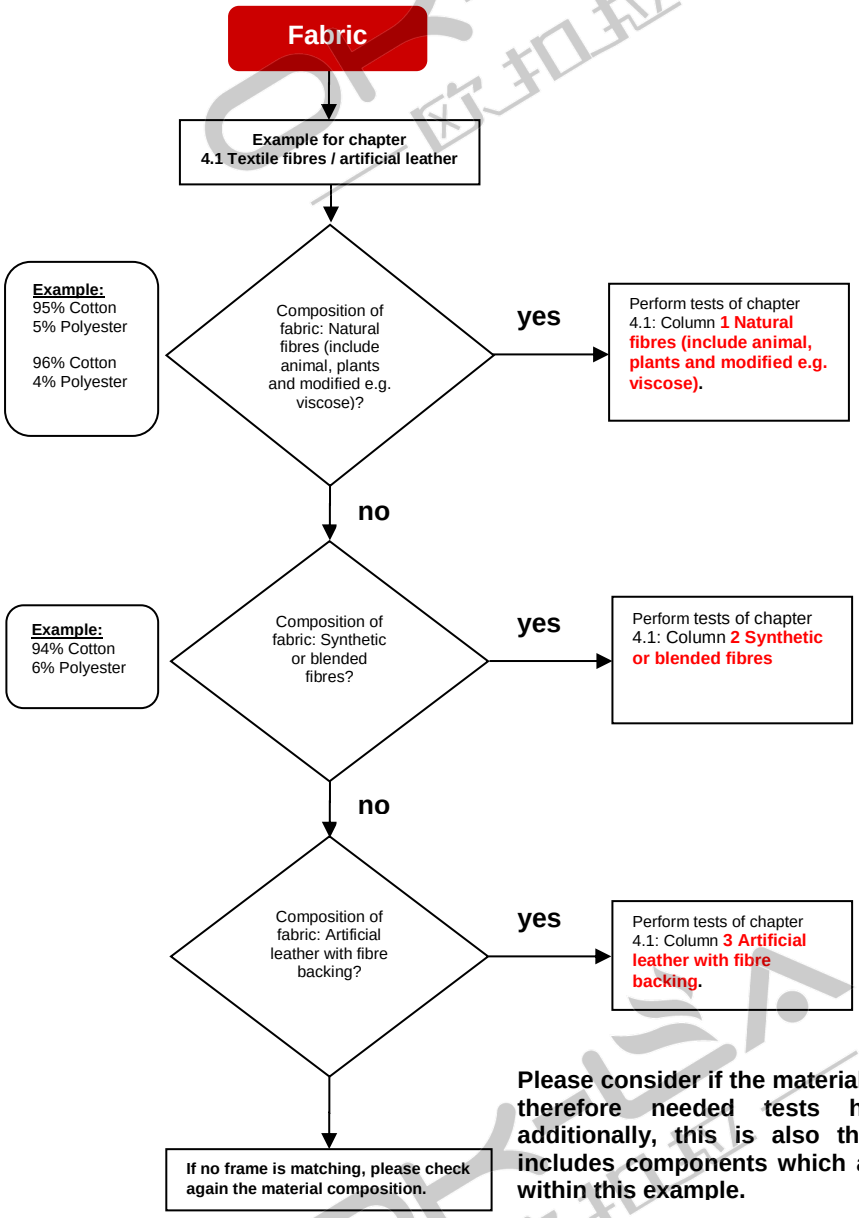
**All recommendations are marked red and bold within the frames.**

## 5.1 General systematic

### 5.1.1 Selection: Restricted Substances

Following the tool will explain the general systematic to select the recommended restricted substances (4.1 Textile fibres / Artificial leather / Leather / Miscellaneous / Packaging). It does not depend on a specific example and can be used for all kinds of materials, e.g. fabrics, tapes, zippers, leather, patches etc. The example only describes a part of possible questions which have to be observed.

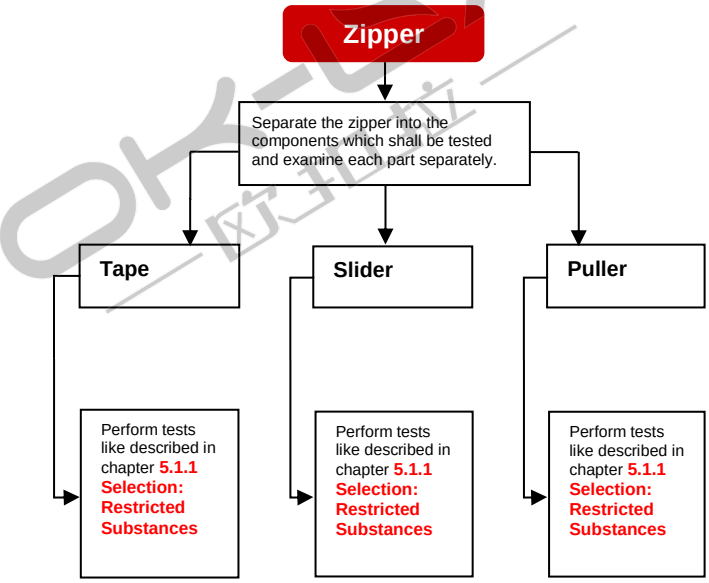
A material can be defined as blended fibre if the percentage of synthetic fibres, in regard to the complete material composition, is higher than 5%.




**Please consider if the material has a print or finish the therefore needed tests have to be selected additionally, this is also the case if the material includes components which are not especially listed within this example.**

### 5.1.2 Selection: Components which shall be tested

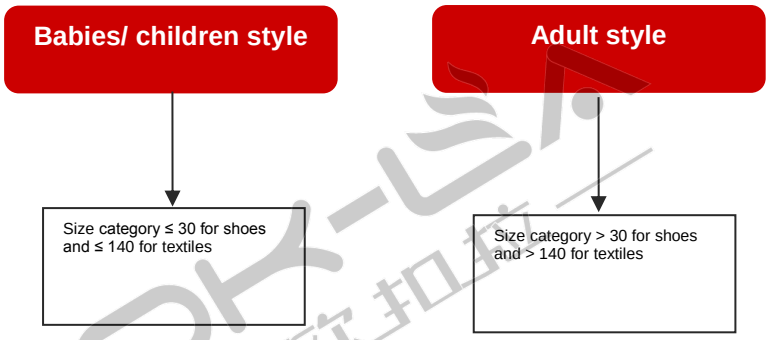
The following tool shall help to understand the general systematic how to separate an example into the components which shall be tested. It does not depend on a specific example and can be used for all kinds of materials, e.g. tapes, zippers, patches etc. The example only describes a part of possible questions which have to be observed. The selection of the needed restricted substances should be based on the systematic of point **5.1.1 Selection: Restricted Substances**.




**Please consider if the zipper has a print or finish the therefore needed tests have to be selected additionally, this is also the case if the zipper includes components which are not especially listed within this example.**

### 5.1.3 Selection: Category babies/ children or adult

The laboratories will need the information if the test results shall be assessed due to the category babies/ children or adult. The size classification for babies is stated below the overview of **3.1 Restricted Substances List (RSL)**.



## 5.2 Product example - Outdoor jacket

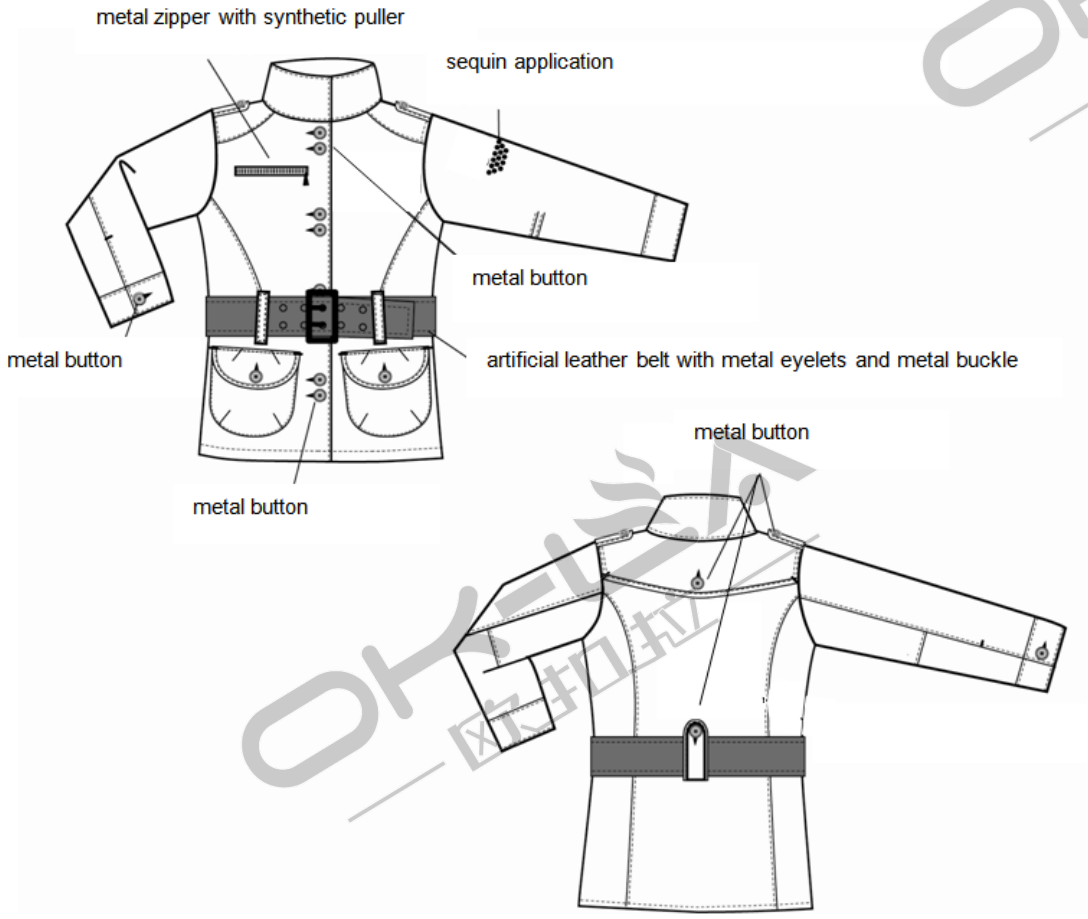
### 5.2.1 Definition of example

| | Shell fabric | Lining | Pocket lining |
|---|---|---|---|
| **Material composition**[1)] | Cotton/Polyester blend | Cotton | Cotton |
| **Finishes** | Garment dye<br>Hydrophobic finish / water repellent | Garment dye | Garment dye |

[1)] A material can be defined as blended fibre if the percentage of synthetic fibres, in regard to the complete material composition, is higher than 5% (see also 5.1.1 Selection: Restricted Substances).

| | |
|---|---|
| **Additional components** | • Artificial leather belt with metal eyelets and metal buckle<br>• Metal buttons<br>• Metal zipper with synthetic puller<br>• Sequins application (synthetic material) |

**In general all components of a style have to comply with the regulations of the s.Oliver restricted substances manual, even if this product example will not explain each possible component separately.**



### 5.2.2 Tool: General instruction

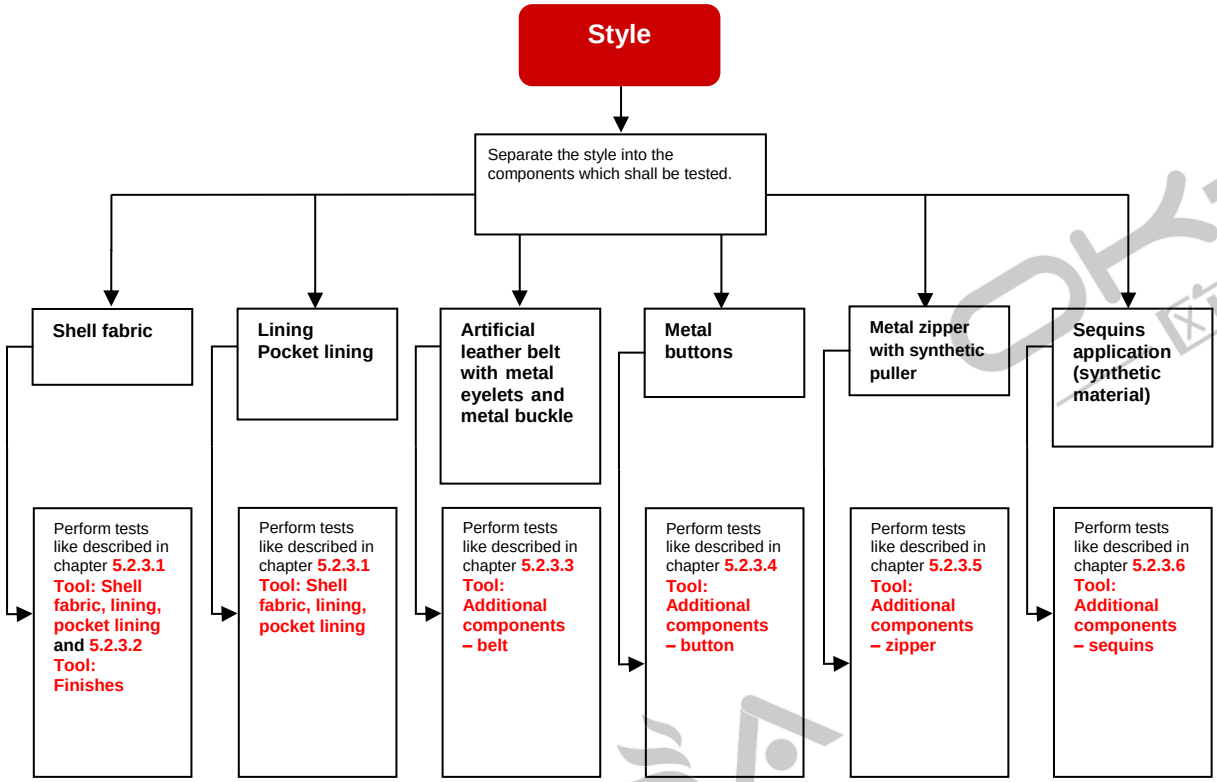
The laboratories will need the information if the test results shall be assessed due to the category babies/ children or adult.

The size classification for babies is stated below the overview of **3.1 Restricted Substances List (RSL)** (see also 5.1.3 Selection: Category babies/ children or adult).

These tools will only advice a part of possible questions which have to be observed. To select the needed restricted substances as well as the components which shall be tested in detail please refer to point **5.1.1 Selection: Restricted Substances** and **5.1.2 Selection: Components which shall be tested**. Within these examples only the solutions will be illustrated.

### 5.2.3 Tool: Separate the style

This separation is only an example which depends on the chapter **5.2.1 Definition of Example.** These questions will be only a part of possible ones which have to be observed.

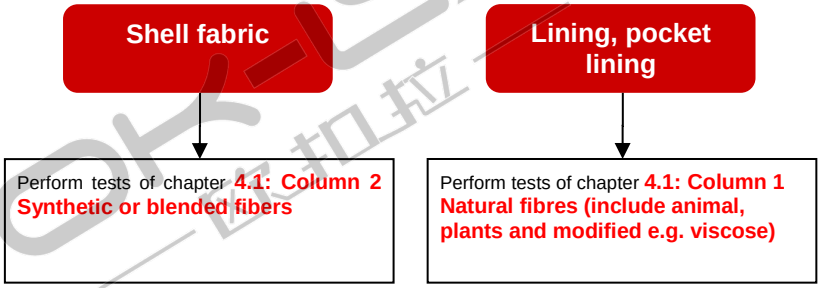



Please note, that the material of the lining and the pocket lining is the same therefore the examples will be mentioned together.

### 5.2.3.1 Tool: Shell fabric, lining, pocket lining

A material can be defined as blended fibre if the percentage of synthetic fibres, in regard to the complete material composition, is higher than 5% (see also 5.1.1 Selection: Restricted Substances).

**Shell fabric:** Cotton/Polyester blend
**Lining:** Cotton
**Pocket lining:** Cotton

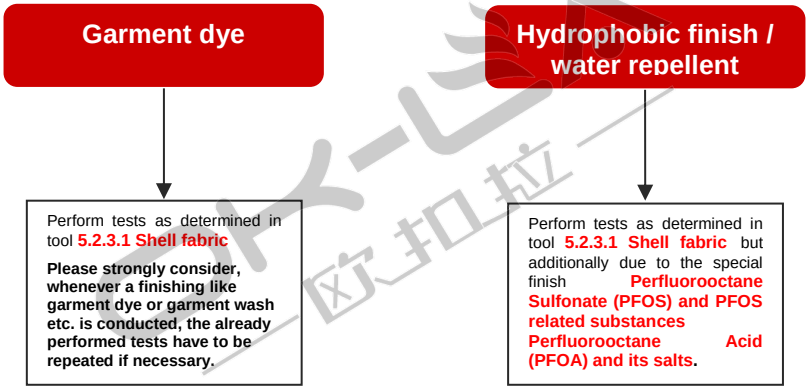



**Please consider if the material has a print or finish the therefore needed tests have to be selected additionally, this is also the case if the material includes components which are not especially listed within this example.**

### 5.2.3.2 Tool: Finishes

Please consider, even though the raw material has passed a restricted substances test, the additional finishes, e.g. garment wash or garment dyed, may cause fails.

**Finishes:** Garment dye and hydrophobic finish / water repellent

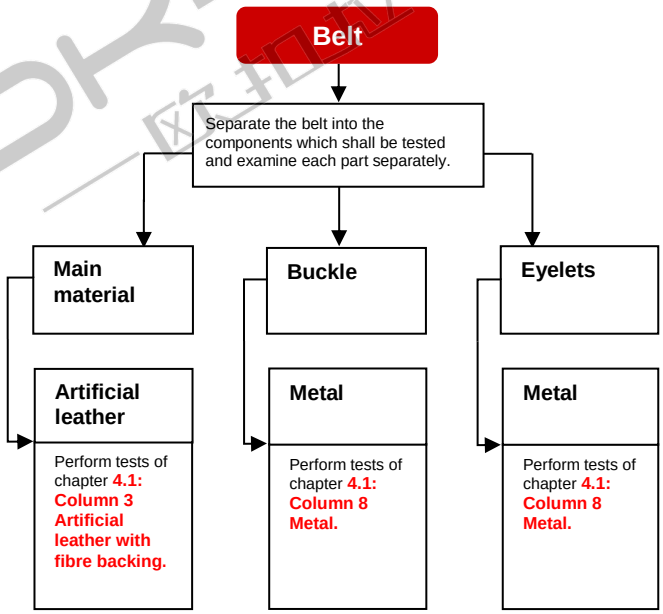


### 5.2.3.3 Tool: Additional components – belt

This tool only includes the material **artificial leather**, but please note, it is very important to make sure that the tests will be selected based on the correct material type.

**Natural leather** or **Bonded leather (LEFA)** would have different requirements than artificial leather. To select the correct restricted substances recommendations, the systematic of point **5.1.1 Selection: Restricted Substances** can be used.

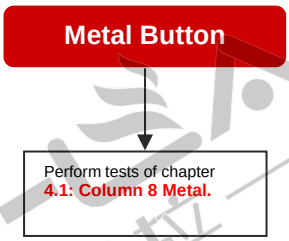
**Belt:** Artificial leather belt with metal eyelets and metal buckle




**Please consider if the belt has a print or finish the therefore needed tests have to be selected additionally, this is also the case if the material includes components which are not especially listed within this example.**

### 5.2.3.4 Tool: Additional components - button

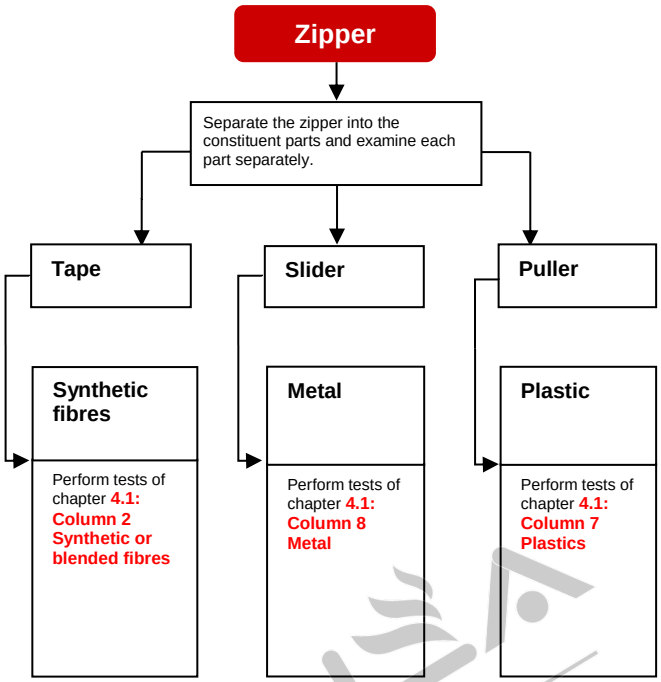
**Button:** Metal buttons




**Please consider if the button has a coating/print the therefore needed tests have to be selected additionally, this is also the case if the button includes components which are not especially listed within this example.**

### 5.2.3.5 Tool: Additional components – zipper

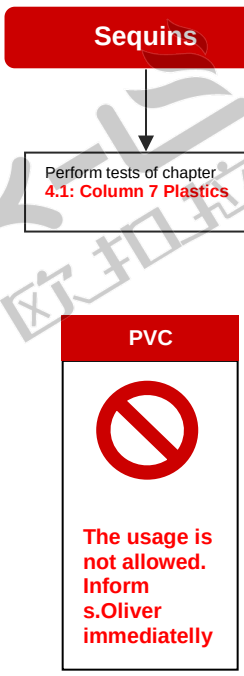
**Zipper:** Metal zipper




**Please consider if the zipper has a print or finish the therefore needed tests have to be selected additionally, this is also the case if the zipper includes components which are not especially listed within this example.**

### 5.2.3.6 Tool: Additional components – sequins

**Sequins:** Sequins application (synthetic material)




**Please consider if the sequins have a print or finish the therefore needed tests have to be selected additionally, this is also the case if the sequins includes components which are not especially listed within this example.**

# 6 Appendix

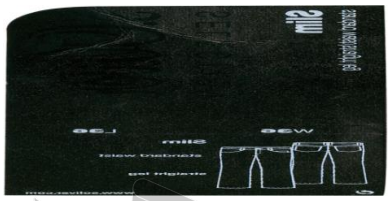
## 6.1 Glossary

### 6.1.1 List of Materials

Testing should be done according to their material composition.

| Material | Examples | Explanation |
|---|---|---|
| Coating and prints |    | e.g. all over prints (AOP), placement prints, coatings |
| Natural materials (include horns, bones, cork, wood, paper, straw) |   | e.g. decorative items, buttons, straw hat |
| Plastics |  | e.g. buttons, stiffeners, plastic rhinestone, sequins |
| Metal |  | e.g. buttons, zippers, labels, plated plastic, bracelet closure, earring |

| | | |
|---|---|---|
| Tape (for all materials) |  | e.g. tapes, patches, ruffles, labels, pipings, velcro (upper & lower part), elastic band, mesh, decorative parts |
| Zippers (for all materials) |  | e.g. plastic puller, textile puller, leather puller, metal teeth, plastic teeth |
| Threads (for all materials) |  | e.g. overlock seams, linking seams, stitching, “s.Oliver” logo embroideries |
| Foams |  | e.g. shoulder pads |
| Feathers |  | e.g. coloured feathers, uncoloured feathers |

| | | |
|---|---|---|
| Packaging (for all materials) |    | e.g. tag for extra button, hangtags, inner lays, cardboards, packaging foils, polybags, hanger, etc. |