



## **Restricted Substances List (RSL)**

## **Chemical Compounds and Substances for Lighting Products**

This requirement document describes WESTWING bans and restrictions on certain chemical compounds and substances due to national or international regulations and/or health and environmental concerns defined by WESTWING.

The purpose of WESTWING requirements concerning chemical substances in WESTWING products is to:

- minimize harmful effects to customers' health and to the environment from WESTWING products.
- ensure compliance of WESTWING products with health and environmental regulations in all WESTWING markets.

Unless otherwise stated, the requirements are valid for each separate homogeneous material in the product. This document will be updated regularly.

| Classification                    | Restricted Substances   | CAS No.  | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses   | Testing Method   | Regulation / Limit Value   |
|-----------------------------------|---|--|---|--|--|--|
| Formaldehyde release              | Formaldehyde  | 50-00-0  |   |  | Coated or uncoated wood-based materials: (DIN) EN 717-1 with test conditions in EU REACH Annex XVII Entry 77 Appendix 14 or alternative: DIN EN 16516, or CARB2 certificate (Note: only CARB2 test report is not accepted) | EU REACH Annex XVII Entry 77 0.062 mg/m3 (0.05 mL/m3, 0.05 ppm) for furniture and wood-based articles 0.08 mg/m3 (0.065 mL/m3, 0.065 ppm) other articles     |
| Acidic and Alkaline<br>Substances | pH value  | -  |   | To avoid irritation or chemical burns to the skin, the pH value of products must be in the range of human skin— approximately pH 5.5.  Usually for white or uncoloured textile, pH is 4.0~5.5 to avoid yellowing.  | EN ISO 3071 (ISO 3071) Leather: EN ISO 4045 (ISO 4045)   | No legal requirement in EU incl. Switzerland  *Westwing requirement: - Textile: 4.0 - 9.0, - Leather: 3.5 - 7.5.   |
|                                   | Tributyltin (TBT) Triphenyltin (TPhT) Trimethyltin (TMT) Trioctyltin (TOT) Tricyclohexyltin (TCyHT) Dibutyltin (DBT) Dioctyltin (DOT) | various various various various various various various various            | X<br>X<br>X   | Organotins can 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. | or Solvent Extraction, GC-MS Analysis for  | EU REACH ANNEX XVII Entry 20  Sum of TBT, TPhT, TMT,TOT,TCyHT: 0.1% (1000 mg/kg) by weight of Tin;  DBT & DOT Each: 0.1% (1000 mg/kg) by weight of Tin       |
| AZO Dyes                          | 4-Amino azobenzene o-Aminoazotoluene 4-Aminodiphenyl 2-Amino-4-nitrotoluene o-Anisidine Benzidine p-Chloroaniline                     | 60-09-3<br>97-56-3<br>92-67-1<br>99-55-8<br>90-04-0<br>92-87-5<br>106-47-8 | x<br>x<br>x   | incorporate one or several azo groups (-N=N-)<br>bound with aromatic compounds, can be<br>found in disperse dye, reactive dye, direct<br>dye, acid dye etc.<br>Thousands of azo dyes exist, but  | All materials except Leather: EN ISO 14362-1 Leather: EN ISO 17234-1 (harmonised version) p-Aminoazobenzene: All materials except Leather:   | each 30 mg/kg of 22 azo dyes  *Westwing requirement: textile/leather/paint/print/coating/feather/down/wood/paper/natural straw [Excl white color] of prod'ts |

| Clas         | sification            | Restricted Substances                      | CAS No.  | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses  | Testing Method   | Regulation / Limit Value   |
|--------------|-----------------------|--|----------|---|---|--|--|
|              |                       | 4-Chloro-o -toluidine                      | 95-69-2  |   | cleavable amines are restricted.  | EN ISO 14362-3   | shall have <= 20 mg/kg   |
|              |                       | p-Cresidine                                | 120-71-8 | x   | oreavable animies are restricted.   | Leather: EN ISO 17234-2  | of 24 azo dyes   |
|              |                       | 2,4-Diaminoanisole                         | 615-05-4 |   |   | (harmonised version)   | 0.2.420 4/63   |
|              |                       | 4,4'-Diaminodiphenylmethane                | 101-77-9 | Х   |   | (namenisea reision)  |  |
|              |                       | 3,3'-Dichlorobenzidine                     | 91-94-1  |   |   |  |  |
|              |                       | 3,3'-Dimethoxybenzidine                    | 119-90-4 |   |   |  |  |
|              |                       | 3,3'-Dimethylbenzidine                     | 119-93-7 |   | 1   |  |  |
|              |                       | 3,3'-Dimethyl-4,4'-diamino-diphenylmethane | 838-88-0 | Х   | 1   |  |  |
|              |                       | 4,4'-Methylene-bis-(2-chloroaniline)       | 101-14-4 | X   |   |  |  |
|              |                       | 2-Naphthylamine                            | 91-59-8  |   | 1   |  |  |
|              |                       | 4,4'-Oxydianiline                          | 101-80-4 | х   | 1   |  |  |
|              |                       | 4,4'-Thiodianiline                         | 139-65-1 |   | 1   |  |  |
|              |                       | 2,4-Toluenediamine                         | 95-80-7  | Х   |   |  |  |
|              |                       | o-Toluidine                                | 95-53-4  | Х   |   |  |  |
|              |                       | 2,4,5-Trimethylaniline                     | 137-17-7 |   |   |  |  |
|              |                       | 2,4-Xylidine *                             | 95-68-1  |   |   |  |  |
|              |                       | 2,6-Xylidine *                             | 87-62-7  |   |   |  |  |
| Heavy Metals | Total Heavy<br>Metals | Cadmium (Cd) and its compounds             | _        | X   | Cadmium compounds may be used as pigments (especially in red, orange, yellow and green); as a stabilizer for PVC; and in fertilizers, biocides, and paints.                       | Acid Digestion Method, ICP-OES   | EU REACH ANNEX XVII Entry 23  Paints on painted article: 1000 mg/kg (0.1%), Plastic material: 100 mg/kg (0.01%), Metal part in jewelry: 100 mg/kg (0.01%),   |
|              |                       |  |          |   |   |  | (expressed as Cd metal).   |
|              |                       | Lead (Pb) and its compounds                | _        | X   | May be associated with alloys, plastics, paints, inks, pigments and surface coatings.   | Acid Digestion Method, ICP-OES; EN 16711-3<br>(and EN 12472) for Pb release test | EU REACH ANNEX XVII Entry 63  500 mg/kg (0.05%) or lead release <= 0.05 μg/cm²/h (for articles or accessible parts thereof may, during normal or reasonably forseeable conditions of use, be placed in the mouth by children. (expressed as Pb metal). |
|              |                       | Phenylmercury compounds                    | -        |   | Used as catalysts in polyurethane systems used for coatings, adhesives, sealants and elastomer; could be incorporated into the polymer structure and remain in the final article. | Acid Digestion Method, ICP-OES   | EU REACH ANNEX XVII Entry 62<br>0.01% (100 mg/kg) (expressed as Hg metal).   |

| Clas          | sification                             | Restricted Substances                               | CAS No.                  | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses  | Testing Method   | Regulation / Limit Value  |
|---------------|--|---|--------------------------|---|---|--|---|
|               | Chromium VI                            | Chromium VI (Cr VI) compounds                       | _                        | х   | Though typically associated with leather tanning.   | EN ISO 17075-1/-2 (ISO 17075-1/-2)<br>Aging test:<br>EN ISO 10195 (ISO 10195) Method A2  | EU REACH ANNEX XVII Entry 47 Leather article/part coming into contact with skin: 3 mg/kg (0.0003%)(expressed as Cr VI metal).   |
|               | Toxic Elements in Packaging Components | Pb+Cd+Hg+Cr VI                                      | _                        | х   |   | Acid Digestions followed by ICP/AAS Analysis,<br>UV- Visible Spectrometer  | EU PPWR Regulation (EU) 2025/40<br>Sum (Pb+Cd+Hg+Cr VI): 100 mg/kg (100 ppm)  |
| Chlo          | rinated Paraffins                      | Short-chain Chlorinated Paraffins (SCCPs) (C10-C13) | 85535-84-8 and<br>others | x   | Can be used as softeners, flame retardants, or fat-liquoring agents in leather production; also as a plasticizer in polymer production.                                     | All materials except leather: EN ISO 22818 (ISO 22818); Leather: EN ISO 18219-1 (ISO 18219-1); Or Solvent Extraction, GC-MS Analysis | EU POPs regulation (EU) 2019/1021 1500 mg/kg (0.15%) for articles; 10000 mg/kg (1%) for mixtures;  Westwings Requirement: use 1000 mg/kg (0.1%) as limit for articles and mixtures.   |
| Chlorophenois |  | Pentachlorophenol (PCP)                             | 87-86-5                  |   | Chlorophenols are polychlorinated compounds used as preservatives or pesticides.  PCP can also be used as in-can preservatives in print pastes and other chemical mixtures. | § 64 LFGB B 82.02-08<br>(BVL B 82.02-8)<br>or<br>DIN 50009<br>or<br>DIN EN ISO 17070<br>(EN ISO 17070)                               | EU POPs regulation (EU) 2019/1021: 5 mg/kg (Detection Limit: 0.5 mg/kg)  Swiss Chemical Risk Reduction Ordinance (ChemRRV/ORRChem) Art. 3 Appendix 1.2 and Appendix 2.17 Not used; 5 mg/kg (wood-based materials)  German Food, Feed and Commodities Law §30 (LFGB §30) 5 mg/kg  German Chemicals Prohibition Ordinance (ChemVerbotsV), Appendix 1 5 mg/kg (PCP-treated products)  Requirement Westwing: Not detected |

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|---|--|---|---|---|---|---|
| Dimethylfumarate                        | Dimethylfumarate (DMFu)  | 624-49-7  |   | DMFu is an anti-mold agent that may be used<br>in sachets in packaging to prevent the buildup<br>of mold, especially during shipping.<br>May be found in leather products   | EN ISO 16186 (ISO 16186)  | EU REACH ANNEX XVII Entry 61 0.1 mg/kg  |
| Alkylphenol Ethoxylates<br>(APEOs)      | Nonyiphenol ethoxylates (NPEOs)<br>and Octylphenol ethoxylates (OPEOs)   | _   | х   | 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. | EN ISO 18254-1 (ISO 18254-1) or Solvent<br>Extraction, GC-MS Analysis or LC-MS Analysis | EU REACH ANNEX XVII Entry 46a  for textile article, which can reasonably be expected to be washed in water during their normal lifecycle: < 100 mg/kg (0.01%) for NPEO  for all other articles: 1000 mg/kg (0.1%) (SVHC)  OPEOs: All articles: 1000 mg/kg (0.1%) (SVHC) |
| RoHS Directive 10 restricted substances | Lead (Pb) Mercury (Hg) Cadmium (Cd) Hexavalent chromium (Cr VI) Polybrominated biphenyls (PBBs) Polybrominated diphenyl ethers (PBDEs) Bis(2-ethylhexyl) phthalate (DEHP) Butyl benzyl phthalate (BBP) Dibutyl phthalate (DBP) Diisobutyl phthalate (DIBP) | <br><br>59536-65-1<br><br>117-81-7<br>85-68-7<br>84-74-2<br>84-69-5 | X<br>X<br>X<br>X<br>X<br>X<br>X<br>X  | The mercury, cadmium, lead, chromium VI, PBBs and PBDEs, phthalates, when used in EEE, can have a negative impact on recycling and on human health and the environment during EEE waste management operations, especially when treated in less than optimal conditions.                     | EN 62321 (IEC 62321)  | EU RoHS Directive 2011/65/EU and amendment (EU) 2015/863  for homogeneous materials of EEE: Cd: 100 mg/kg (0.01%); Pb, Hg, Cr VI: each 1000 mg/kg (0.1%); PBBS, PBDES, each 1000 mg/kg (0.1%); DEHP, BBP, DBP, DIBP: each 1000 mg/kg (0.1%)                             |
| Batteries Directive 3<br>heavy metals   | Mercury (Hg) Cadmium (Cd) Lead (Pb)  | -   | x<br>x<br>x   | The mercury, cadmium and lead in the batteries and accumulators have a negative impact on the environment.  | AAS Analysis, or ICP Analysis, or EPA/SW-846  | EU Batteries Directive 2006/66/EC and amendment 2013/56/EU, EU Batteries Regulation (EU) 2023/1542 for batteries, accumulators and button cells: Hg: 5 mg/kg (0.0005%); Cd: 20 mg/kg (0.002%); Pb: 40 mg/kg (0.004%)  |

| lassification  | Restricted Substances   |             | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses   | Testing Method | Regulation / Limit Value                                   |
|--|---|-------------|---|--|----------------|--|
| Perfluorooctane                                      | Perfluorooctanesulfonic acid (PFOS)   | 1763-23-1   |   | PFAS may be present as   |                | EU POPs regulation (EU) 2019/1021                          |
| Perfluorooctane<br>Sulfonate (PFOS)<br>and Its Salts | Perfluorooctanesulfonic acid, potassium salt (PFOS-K)   | 2795-39-3   |   | unintended byproducts in long-chain and short-chain commercial water-,                     | EN 17681-1     | PFOS and its salts: sum 0.025 mg/kg (25 ppb,               |
|  | Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)  | 29457-72-5  |   | oil-, and stain-repellent agents. PFOA<br>may also be used in polymers like                |                | 0.0000025%) PFOS-related compounds: sum 1 mg/kg (1000 ppb, |
|  | Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )   | 29081-56-9  |   | Polytetrafluoroethylene (PTFE).  |                | 0.0001%)   |
|  | Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )                                       | 70225-14-8  |   | All PFAS are either persistent themselves or degrade to other persistent PFAS. Persistence |                |  |
|  | Perfluorooctanesulfonic acid,<br>tetraethylammonium salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> ) | 56773-42-3  |   | due to strength of the carbon-fluorine bond.<br>PFAS remain in environment for decades to  |                |  |
| PFOS-related<br>Substances                           | N-Ethylperfluoro-1-octanesulfonamide (N-Et-FOSA)  | 4151-50-2   |   | centuries, so called "Forever Chemicals".  |                |  |
|  | N-Methylperfluoro-1-octanesulfonamide (N-Me-FOSA)   | 31506-32-8  |   |  |                |  |
|  | 2-(N-Ethylperfluoro-1-octanesulfonamido)-ethanol (N-Et-FOSE)  | 1691-99-2   |   |  |                |  |
|  | 2-(N-Methylperfluoro-1-octanesulfonamido)-<br>ethanol (N-Me-FOSE)   | 24448-09-7  |   |  |                |  |
|  | Perfluoro-1-octanesulfonyl fluoride (POSF)  | 307-35-7    |   |  |                |  |
|  | Perfluorooctane sulfonamide (PFOSA)   | 754-91-6    |   |  |                |  |
| Perfluorooctanoic                                    | Perfluorooctanoic acid (PFOA)   | 335-67-1 X  |   |  |                | EU POPs regulation (EU) 2019/1021                          |
| Acid (PFOA) and its                                  | Sodium perfluorooctanoate (PFOA-Na)   | 335-95-5    |   |  |                |  |
| Salts  | Potassium perfluorooctanoate (PFOA-K)   | 2395-00-8   |   |  |                | PFOA and its salts: sum 0.025 mg/kg (25 ppb,               |
|  | Silver perfluorooctanoate (PFOA-Ag)   | 335-93-3    |   |  |                | 0.0000025%)  |
|  | Perfluorooctanoyl fluoride (PFOA-F)   | 335-66-0    |   |  |                | PFOA-related compounds: sum 1 mg/kg (1000 ppb,             |
|  | Ammonium pentadecafluorooctanoate (APFO)  | 3825-26-1 X |   |  |                | 0.0001%)   |
| PFOA-related<br>Compounds                            | 1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)  | 39108-34-4  |   |  |                |  |
|  | Methyl perfluorooctanoate (Me-PFOA)   | 376-27-2    |   |  |                |  |
|  | Ethyl perfluorooctanoate (Et-PFOA)  | 3108-24-5   |   | ]  |                |  |
|  | 1H,1H,2H,2H-Perfluorooctylacrylate (6:2 FTA)  | 17527-29-6  |   | ]  |                |  |
|  | 1H,1H,2H,2H-Perfluorooctyl methacrylate (6:2 FTMA)  | 2144-53-8   |   |  |                |  |
|  | 2-Perfluorooctylethanol (8:2 FTOH)  | 678-39-7    |   | 1  |                |  |
|  | 1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)   | 27905-45-9  |   | 1  |                |  |
|  | 1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2<br>FTMA)   | 1996-88-9   |   |  |                |  |
|  | 2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)  | 34598-33-9  |   |  |                |  |

| ssification  | Restricted Substances                                     | CAS No.     | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses | Testing Method | Regulation / Limit Value                                  |
|--|---|-------------|---|----------------|----------------|---|
| Ifonic Acid (PFHxS)                                  | Perfluorhexanesulfonic acid (PFHxS)                       | 355-46-4    | Х   |                |                | EU POPs regulation (EU) 2019/1021                         |
| and Its Salts  |   |             |   |                |                | PFHxS and its salts: sum 0.025 mg/kg (25 ppb, 0.0000025%) |
| PFHxS-related  | N-Methylperfluoro-1-hexanesulfonamide (N-Me-              | 68259-15-4  |   |                |                | PFHxS-related compounds: sum 1 mg/kg (1000 ppb,           |
| Compounds  | FHxSA)  |             |   |                |                | 0.0001%)  |
|  | Perfluorohexane sulfonamide (PFHxSA)                      | 41997-13-1  |   |                |                | ,   |
| C9-C14 PFCAs and                                     | Perfluorononanoic acid (PFNA, C9-PFCA)                    | 375-95-1    | Х   |                |                | EU REACH Annex XVII Entry 68                              |
| Their Salts  | Ammonium perfluorononanoate (NH4-PFN)                     | 4149-60-4   | X   |                |                |   |
|  | Sodium perfluorononanoate (Na-PFN)                        | 21049-39-8  | Х   |                |                | C9-C14 PFCAs and their salts: sum 0.025 mg/kg (25         |
|  | Perfluorodecanoic acid (PFDA, C10-PFCA)                   | 335-76-2    | Х   |                |                | ppb, 0.0000025%)  |
|  | Ammonium perfluorodecanoate (NH4-PFD)                     | 3108-42-7   | Х   |                |                | C9-C14 PFCA-related substances: sum 0.26 mg/kg (26        |
|  | Sodium perfluorodecanoate (Na-PFD)                        | 3830-45-3   | X   |                |                | ppb, 0.000026%)   |
|  | Perfluoroundecanoic acid (PFUnA, C11-PFCA)                | 2058-94-8   | Х   |                |                |   |
|  | Perfluorododecanoic acid (PFDoA, C12-PFCA)                | 307-55-1    | X   |                |                |   |
|  | Perfluorotridecanoic acid (PFTrDA, C13-PFCA)              | 72629-94-8  | X   |                |                |   |
|  | Perfluorotetradecanoic acid (PFTeDA, C14-PFCA)            | 376-06-7    | X   |                |                |   |
|  | Perfluoro-3-7-dimethyloctanecarboxylate (PF-3,7-          | 172155-07-6 |   |                |                |   |
|  | DMOA)   | 1,1133 0, 0 |   |                |                |   |
| C9-C14 PFCA-<br>related Substances                   | 1H,1H,2H,2H-Perfluorododecyl acrylate (10:2 FTA)          | 17741-60-5  |   |                |                |   |
|  | 1H,1H,2H,2H-Perfluorododecyl methacrylate (10:2 FTMA)     | 2144-54-9   |   |                |                |   |
|  | 1H,1H,2H,2H-Perfluorododecanol (10:2 FTOH)                | 865-86-1    |   |                |                |   |
|  | 1H,1H,2H,2H-perfluorotetradecan-1-ol (12:2 FTOH)          | 39239-77-5  |   |                |                |   |
|  | 1H,1H,2H,2H-Perfluorododecanesulphonic acid<br>(10:2 FTS) | 120226-60-0 |   |                |                |   |
|  | 1H,1H,2H,2H-Perfluorododecyl iodide (10:2 FTI)            | 2043-54-1   |   |                |                |   |
|  |   | 30046-31-2  |   |                |                |   |
|  | 2-Perfluorooctylethanol (8:2 FTOH)                        | 678-39-7    |   |                |                |   |
|  | 2H,2H,3H,3H-Perufloroundecanoic acid (H4PFUnA)            | 34598-33-9  |   |                |                |   |
| Perfluorohexanoic                                    | Perfluorohexanoic acid (PFHxA,                            | 307-24-4    |   |                |                | EU REACH Annex XVII (proposed in June 2023)               |
| Acid (PFHxA) and                                     | Undecafluorohexanoic acid)                                |             |   |                |                |   |
| Its Salts  | Ammonium perfluorohexanoate (APFHx)                       | 21615-47-4  |   |                |                | PFHxA and its salts: sum 0.025 mg/kg (25 ppb,             |
| PFHxA-related  | 1H,1H,2H,2H-Perfluorooctanesulfonic acid                  | 27619-97-2  |   |                |                | 0.0000025%)   |
| Substances   | (6:2 FTS)   |             |   |                |                | PFHxA-related substances: sum 1 mg/kg (1000 ppb,          |
|  | 1H,1H,2H,2H-Perfluorooctanol (6:2 FTOH)                   | 647-42-7    |   |                |                | 0.0001%)  |
| Perfluoroheptanoi<br>c Acid (PFHpA) and<br>Its Salts | Perfluoroheptanoic acid (PFHpA)                           | 375-85-9    |   |                |                | PFHpA and its salts: sum 0.025 mg/kg (25 ppb, 0.0000025%) |

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|--|--|---|---|--|---|--|
| Flame Retardants                           | Hexabromocyclododecane (HBCDD)   | 3194-55-6 and others  | x   |  | EN ISO 17881-1/-2 (ISO 17881-1/-2) or Solvent<br>Extraction, GC-MS Analysis or LC-MS Analysis | EU POPs regulation (EU) 2019/1021<br>0.0075% (75 mg/kg)  |
| Polycyclic Aromatic<br>Hydrocarbons (PAHs) | Benzo[a]anthracene Benzo[e]acephenanthrylene benzo[a]pyrene; benzo[d,e,f]chrysene Benzo[e]pyrene Benzo[j]fluoranthene Benzo[k]fluoranthene Chrysene Dibenzo[a,h]anthracene *Anthracene *Benzo[g,h,i]perylene *Fluoranthene  *Indeno[1,2,3-cd]pyrene *Naphthalene *Phenanthrene *Pyrene | 56-55-3<br>205-99-2<br>50-32-8<br>192-97-2<br>205-82-3<br>207-08-9<br>218-01-9<br>53-70-3<br>120-12-7<br>191-24-2<br>206-44-0<br>193-39-5<br>91-20-3<br>85-01-8<br>129-00-0 | X X X X X X X X X X X   | 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. | AfPS GS 2019:01 PAK   | EU REACH ANNEX XVII Entry 50 German Food, Feed and Commodities Law §30 (LFGB §30) AfPS GS 2019.01 PAK *Follows limits in AfPS GS 2019:01 PAK Concrete Reach and AfPS GS 2019:01 PAK Requirements: see separate Sheet |
| Volatile Organic<br>Compound (VOC)         | Benzene  | 71-43-2   |   | processes such as solventbased polyurethane coatings and glues/adhesives.  | Headspace GC-MS Headspace GC-MS   | EU REACH Annex XVII Entry 5 1000 mg/kg (0.1%) for mixtures  EU REACH Annex XVII Entry 48 1000 mg/kg (0.1%) for mixtures  |

| Class                                  | sification                          | Restricted Substances   | CAS No.                   | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) | Potential Uses  | Testing Method | Regulation / Limit Value   |
|--|-------------------------------------|---|---------------------------|---|---|----------------|--|
| Aller                                  | genic Carcinogenic                  | C.I. Disperse Blue 1  | 2475-45-8                 |   | Disperse dyes are a class of water insoluble  | DIN 54231      | German Food, Feed and Commodities Law §30 (LFGB  |
| Dispe                                  | erse Dyestuffs                      | C.I. Disperse Blue 3  | 2475-46-9                 |   | dyes that penetrate the fiber system of   |                | §30)   |
|  |                                     | C.I. Disperse Blue 35   | 56524-77-                 |   | synthetic or manufactured fibers and are held   |                | Not detected   |
|  |                                     |   | 7/56524-76-6              |   | in place by physical forces without forming   |                | (detection limit : 5 mg/l in extract)  |
|  |                                     | C.I. Disperse Blue 106  | 12223-01-7                |   | chemical bonds. Disperse dyes are used in   |                |  |
|  |                                     | C.I. Disperse Blue 124  | 61951-51-7                |   | synthetic fiber (e.g., polyester, acetate etc.).  |                |  |
|  |                                     | C.I. Disperse Red 1   | 2872-52-8                 |   | _   |                |  |
|  |                                     | C.I. Disperse Orange 3  | 730-40-5                  |   |   |                |  |
|  |                                     | C.I. Disperse Orange 37/59/76   | 13301-61-                 |   |   |                |  |
|  |                                     |   | 6/12223-33-               |   |   |                |  |
|  |                                     | C.I. Biomana Vallaur 2  | 5/51811-42-8<br>2832-40-8 |   | -   |                |  |
|  |                                     | C.I. Disperse Yellow 3  | 2832-40-8                 |   |   |                |  |
|  | High risk SVHCs                     | Octamethylcyclotetrasiloxane (D4)   | 556-67-2                  | Х   | Candidate List of substances of very high   | Due diligence  | REACH Regulation (EC) No 1907/2006   |
| 1                                      | that were<br>frequently<br>detected | Decamethylcyclopentasiloxane (D5)   | 541-02-6                  | Х   | concern of for Authorisation cover AP/APEO, phthalates, flame retardants, SCCP, MCCP, lead chromate pigment, DMFa, NMP, DMAc, Bisphenols, etc.  |                | 0.1% (w/w) per article/component   |
|  |                                     | Dodecamethylcyclohexasiloxane (D6)  | 540-97-6                  | Х   |   |                | Supplier needs to notify ECHA by submiting SVHC  |
|  |                                     | Bisphenol A (BPA)   | 80-05-7                   | Х   |   |                | notification and WESTWING if the article contains an   |
|  |                                     | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with >= 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | _                         | х   |   |                | SVHC in quantities above one tonne per<br>producer/importer per year and if the substance is<br>present in those articles above a concentration of |
|  |                                     | 4-Nonylphenol, branched and linear  | _                         | Х   |   |                | 0.1% (w/w).  |
|  |                                     | Formamide   | 75-12-7                   | X   |   |                |  |
|  |                                     | Diazene-1,2-dicarboxamide (C,C'-  | 123-77-3                  | Х   |   |                | WFD Directive 2008/98/EC   |
|  |                                     | azodi(formamide)) (ADCA)  |                           |   |   |                | 0.1% (w/w) per article/component   |
| Ē                                      |                                     | *   | 25973-55-1                | Х   |   |                | Supplier needs to notify ECHA by submit SCIP   |
| cer                                    |                                     | (UV-328)  |                           |   |   |                | notification and WESTWING if the article contains an   |
| S                                      |                                     | N,N-dimethylformamide   | 68-12-2                   | Х   | _   |                | SVHC above a concentration of 0.1% (w/w).  |
| ë                                      |                                     | Medium-chain chlorinated paraffins (MCCP) (UVCB   | _                         | Х   |   |                | 22 ab 1000 mg/kg (0.1%)  |
| Η >                                    |                                     | substances consisting of more than or equal to  |                           |   |   |                | each 1000 mg/kg (0.1%)   |
| Ver                                    |                                     | 80% linear chloroalkanes with carbon chain lengths  |                           |   |   |                |  |
| of                                     |                                     | within the range from C14 to C17) Short Chain Chlorinated Paraffins (C10-13)  | 85535-84-8                | v   | -   |                |  |
| ses                                    |                                     | Triphenyl phosphate (TPhP)  | 115-86-6                  | v   | -   |                |  |
| star                                   | Other SVHCs                         | —   | _                         | X   | †   |                |  |
| SVHC (Substances of Very High Concern) | other syries                        |   |                           |   |   |                |  |
| All bi                                 | ocidal treated<br>uct               | _   | _                         |   | Biocidal products, which are used to protect humans, animals, materials or articles against harmful organisms like pests or bacteria, by the action of the active substances contained in the biocidal product. | Due diligence  | The Biocidal Products Regulation (BPR, Regulation (EU) 528/2012) -Authorized active substances -the labeling (CLP) Regulation ((EC) No 1272/2008)  |

| Classification        | Restricted Substances | CAS No. | SVHC<br>(Limit to trigger SCIP<br>Notification & SVHC<br>Communication<br>obligations:<br>1000 mg/kg) |  | Testing Method | Regulation / Limit Value                      |
|-----------------------|-----------------------|---------|---|--|----------------|---|
| PVC Product           |                       | _       |   | For legal requirement conformance (total Cadmium/Organotins/Phthalates/SCCP etc.) concern. | Due diligence  | Phase out PVC material.                       |
| Natural Latex Product |                       | _       |   | Can cause allergic reaction (to protein) after contacting with human skin.                 | Due diligence  | Phase out natural latex for allergen concern. |

## Remark:

- 1) REACH Regulation REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals. It entered into force on 1 June 2007.

  (EC) No 1907/2006 REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry. It also promotes alternative methods for the hazard assessment of substances in order to reduce the number of tests on animals.
- 2) BPR, Regulation (EU) 528/2012 The Biocidal Products Regulation (BPR, Regulation (EU) 528/2012) concerns the placing on the market and use of biocidal products, which are used to protect humans, animals, materials or articles against harmful organisms like pests or bacteria, by the action of the active substances contained in the biocidal product. This regulation aims to improve the functioning of the biocidal products market in the EU, while ensuring a high level of protection for humans and the environment.
- 3) POP's regulation (EU) 2019/1021 Porisitent organic pollutants (POPs) are organic substances that persist in the environment, accumulate in living organisms and pose a risk to our health and the environment. They can be transported by air, water or migratory species across international borders, reaching regions where they have never been produced or used. International risk management is necessary as no region can manage the risks posed by these substances alone.
- 4) CLP Regulation The Classification, Labelling and Packaging (CLP) Regulation ((EC) No 1272/2008) is based on the United Nations' Globally Harmonised System (GHS) and its purpose is to ensure a high level of protection of health and the environment, as well (EC) No 1272/2008 as the free movement of substances, mixtures and articles.
- 5) WFD, Directive 2008/98/EC on waste (Waste Framework Directive) sets the basic concepts and definitions related to waste managament, such as definitions of waste, recycling, recovery. It explains when waste ceases to be waste and becomes a secondary raw material (so called end-of-waste criteria), and how to distinguish between waste and by-products, and lays down some basic waste management principle.

6) ROHS Directive 2011/65/EU and biphenyls (PBB) and polybrominated diphenyl ethers (PBDE), bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP). amendment (EU)

7) Batteries Directive

2015/863

2006/66/EC and recycling activities. The Directive also sets out provisions on labelling of batteries and accumulators and their removability from equipment.

2013/56/EU