COOLINVESTMENTS CUSTOMER DEDICATION

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RESTRICTED SUBSTANCES LIST OF COOLINVESTMENTS 1.2

ALKYLPHENOLS (AP) AND ALKYLPHENOL ETHOXYLATES (APEO)					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Nonylphenols (NP) Octylphenols (OP)	25154-52-3 27193-28-8	EU: REACH Regulation 1907/2006 Annex XVII entry No. 46 REACH Regulation 1907/2006 SVHC Candidate List SWITZERLAND: ORRChem annex 1.8 (Art.3)	Extraction, GC-MS	< 10 mg/kg	APEOs are widely used in detergents, scouring agents, wetting agents, softeners, leather finishing, de-gumming for silk, polyester padding and many other uses. APEO's can easily degrade to AP's which are considered to be toxic, persistent to the environment and bioaccumulative.
Nonylphenolethoxylates (NPEO) Octylphenolethoxylates (OPEO	9016-45-9 9063-89-2		Extraction, LC-MS	< 500 mg/kg	

AZO DYES WHICH BY REDUCTIVE CLEAVAGE MAY RELEASE ONE OR MORE ARYLAMINES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Biphenyl-4-ylamin, 4-aminobiphenyl xenylamine	92-67-1	EUROPE: REACH Regulation 1907/2006 Annnex XVII entry no.43 + appendix 8 Switzerland	Textiles (incl. Polyester): EN 14362-1:2012 Leather: EN ISO 17234-1:2010 Test Method for confirmation of 4-Aminoazobenzene (4AAB) Textiles (EU): EN 14362-3: 2012 Leather (EU): EN ISO 17234-2: 2011	< 30 mg/kg	AZO Dyes may release one or more arylamines.The listed arylamines are considered to be carcinogenic. Azo colorants are one of the most important classes of synthetic dyes and pigments. They are used to color textiles, leather, plastics, paper, foods, cosmetics and more.There are many azo dyes which do not cleave to produce carcinogenic aromatic amines listed above.
Benzidine	92-87-5				
4-chloro-o-toluidine	95-69-2				
2-naphtylamine	91-59-8				
o-aminoazotoluene, 4-amino-2',3-dimethylazobenzene 4-o-tolylazo-otoluidine	97-56-3				
5-nitro-o-toluidine	99-55-8				
4-chloroaniline	106-47-8				
4-methoxy-m-phenylenediamine	615-05-4				
4,4'-methylenedianiline; 4,4'-diaminodiphenylmethane	101-77-9				
3,3'-dichlorobenzidine; 3,3'-dichlorobiphenyl-4,4'-ylenediamine	91-94-1				
3,3-dimethoxybenzidine o-dianisidine	119-90-4				
3,3-dimethylbenzidine, 4,4'-bi-o-toluidine	119-93-7				
4,4'-methylenedi-o-toluidine	838-88-0				
6-methoxy-m-toluidine p-cresidine	120-71-8				
4,4'-metylene-bis-(2-chloro-aniline); 2,2'-dichloro-4,4'-ethylenedianiline	101-14-4				
4,4'-oxydianiline	101-80-4				
4,4'-thiodianiline	139-65-1				
o-toluidine, 2-aminotoluene	95-53-4				
4-methyl-m-phenylenediamine	95-80-7				
2,4,5-trimethylaniline	137-17-7				
o-anisidine (2-methoxyanilin)	90-04-0				
4-amino azobenzene	60-09-3				
2,4-xylidine	95-68-1				
2,6-xylidine	87-62-7				

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BIOCIDES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Dimethylfumarate	624-49-7	EUROPE: Regulation 1907/2006 REACH ANNEX XVII No.61	GC-MS ISO/TS 16186: 2012	< 0.1 mg/kg	Dimethyl fumarate (DMFu) is a fungicide used to prevent mould in leather and textiles. DMFu can cause acute dermatitis, eczema, and general fatigue to the persons who have been in contact with this substance. Can also be used as Pesticide.

CHLOROBENZENES AND CHLOROTOLUENES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Pentachlorobenzenes	608-93-5	EUROPE: POP Regulation No.850/2004. SWITZERLAND: ORRChem annex 1.1 (Art.3)	DIN 54232: 2010 GC-MS	< 1 mg / kg (total).	These carriers are used in dyeing polyester and blends of wool and polyester as wool cannot be dyed at the high temperatures (130°C) required for dyeing polyester. Most of these carriers are toxic to humans and aquatic organisms, and some are even carcinogenic.
Hexachlorobenzene	118-74-1				
Trichlorobenzenes	87-61-6 120-82-1 108-70-3	SWITZERLAND: ORRChem annex 1.1 (Art.3)			
Tetrachlorobenzenes	634-66-2 634-90-2 95-94-3	Oeko-tex 100 standard			
Dichlorobenzenes	95-50-1 541-73-1 106-47-7				
Chlorotoluenes	95-49-8				
Dichlorotoluenes	95-73-8 118-69-4 95-75-0				
Trichlorotoluenes	98-07-7 2077-46-5 6639-30-1				
Tetrachlorotoluenes	5216-25-1 81-19-6 134-25-8				
Pentachlorotoluenes	877-11-2, 13014-24-9				

CHLORINATED PARAFFINS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Short-chain chlorinated paraffins (SCCP)	85535-84-8	EUROPE: POP regulation 850/2004.	EN ISO 18219: 2012 (ISO 18219: 2015 implementation date April 2016)	< 1500 mg/kg	SCCP's: used as flame retardants, in plasticizers, paints and adhesives. Also used for fat liquoring of leather. SCCP's may cause long-term adverse effects in the aquatic environment.

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CHLOROPHENOLS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Pentachlorophenol (PCP)	87-86-5	EUROPE: National law in Austria, Denmark, Germany, Netherlands, Norway and Switzerland	Textiles: 1 – Extraction and sample preparation according to method § 64 LFBG B 82.02-08, dated 06/2001 2 – Determination according to method § 35 LFBG B 82.02-08, dated 06/2001 with GC-MS (or with GC-ECD). Leather: ISO 17070:2015 Printed polyester : 1 – Extraction with ASE or alkaline extraction (KOH) 2 – Sample preparation according to method § 35 LFBG B 82.02-08, dated 06/2001 3 – Determination according to method § 35 LFBG B 82.02-08, dated 06/2001 with GC-MS (or with GC-ECD).	< 0.5 mg/kg	Clorophenols are polychlorinated compounds used to preserve wood, leather and textiles. PCP and TeCP's are irritatants to the skin, eyes and mouth and can cause harmful effects to the liver, kidneys, blood and lungs and are probable human carcinogens.
2,3,5,6- Tetrachlorophenol (TeCP)	935-95-5	SWITZERLAND: ORRChem annex 1.1 (Art.3)			
2,3,4,6- Tetrachlorphenol (TeCP)	58-90-2				
2,3,4,5- Tetrachlorphenol (TeCP)	4901-59-3				

DYESTUFFS, ALLERGENIC DISPERSE DYES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
C.I. Disperse Blue 1	2475-45-8	EUROPE: General Product Safety Directive (GPSD). Oeko-tex 100 standard	DIN 54231: 2005	< 5 mg/l (=appr.75 mg/kg)	Disperse dyes are mainly used for dyeing polyester, nylon and cellulose acetate. Some disperse dyes have an allergenous potential to the human skin and are a possible threat to health, especially if the dyes are not colour fast to perspiration. A number of disperse dyes are legally restricted outside the EU. Most of them appear in RSL's of international retailers.
C.I. Disperse Blue 35	12222-75-2				
C.I. Disperse Blue 106	12223-01-7				
C.I. Disperse Blue 124	61951-51-7				
C.I. Disperse Orange 3	730-40-5				
C.I. Disperse Orange 37/59/76	12223-33-5 13301-61-6				
C.I. Disperse Red 1	2872-52-8				
C.I. Disperse Yellow 3	2832-40-8				
C.I. Disperse Blue 3	2475-46-9				
C.I. Disperse Blue 7	3179-90-6				
C.I. Disperse Blue 26	3860-63-7				
C.I. Disperse Blue 102	12222-97-8				
C.I. Disperse Brown 1	23355-64-8				
C.I. Disperse Orange 1	2581-69-3				
C.I. Disperse Orange 149	85136-74-9				
C.I. Disperse Red 11	2872-48-2				
C.I. Disperse Red 17	3179-89-3				
C.I. Disperse Yellow 1	119-15-3				
C.I. Disperse Yellow 9	6373-73-5				
C.I. Disperse Yellow 23	6250-23-3				
C.I. Disperse Yellow 39	12236-29-2				
C.I. Disperse Yellow 49	54824-37-2				

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DYESTUFFS, CARCINOGENIC DYES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
C.I. Acid Red 26	3761-53-3	COMMISSION DECISION 2002/371 Ecological criteria for the Community eco-label to textile products. Oeko-tex 100 standard	DIN 54231: 2005	< 5 mg/l (=appr.75 mg/kg)	These dyestuffs are considered to be carcinogenic.
C.I. Basic Red 9	569-61-9				
C.I. Direct Black 38	1937-37-7				
C.I. Direct Blue 6	2602-46-2				
C.I. Direct Red 28	573-58-0				
C.I. Disperse Blue 1	2475-45-8				
C.I. Disperse Yellow 3	2832-40-8				
C.I. Basic Violet 14	632-99-5				
C.I. Disperse orange 11	82-28-0				
C.I. Basic Violet 3	548-62-9	EUROPE: REACH Regulation 1907/2006 SVHC Candidate List		< 1000 mg/kg	
C.I. Basic Blue 26	2580-56-5				

FLAME RETARDENTS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Heptabromodiphenyl ether	446255-22-7 207122-16-5	EUROPE: POP Regulation 850/2004 SWITZERLAND: ORRChem textiles annex 1.9 (Art.3)	GC-MS or LC-MS	< 5 mg/kg	These types of flame retardents are toxic and are suspected to be carcinogenic. They persist in the environment and food chain, and are likely to pass up the food chain. Flame retardants are often applied to consumer products including textiles, plastics and foams.
Hexabromodiphenyl ether	68631-49-2 207122-15-4				
Tetrabromodiphenyl ether	5436-43-1				
Pentabromodiphenyl ether (PentaBDE)	32534-81-9 60348-60-9				
Tris-(2,3-dibromopropyl)- phosphate (TRIS)	126-72-7	EUROPE: Regulation 1907/2006 REACH ANNEX XVII No.4, No.7, No.8			
Tris - (aziridinyl) - phosphineoxide (TEPA)	545-55-1				
Polybrominated biphenyls (PBBs)	59536-65-1				
Octabromodiphenylether (octaBDE)	32536-52-0	EUROPE: REACH Regulation 1907/2006 ANNEX XVII No.45			

FORMALDEHYDE					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Formaldehyde	50-00-0	EUROPE: National law in Austria, Czech Republic, Finland, France, Germany, Lithuania, Norway, Poland, Slovakia & The Netherlands	Textiles: ISO 14184-1: 2011 Leather: ISO 17226-2: 2008	Direct skin contact: < 75 mg/kg Without direct skin contact: < 300 mg/kg	Formaldehyde: used in anti-creasing, anti-shrinking, easy-ironing and water repellence finishing. Formaldehyde is a toxic chemical which can induce irritation to eyes and nose and even cause cancer.

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HEAVY METALS, EXTRACTABLE					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Antimony (Sb)	7440-36-0	Oeko-tex 100 standard	Extraction with acid perspiration according to EN ISO 105-E04: 2013	< 30 mg/kg	Many heavy metals are bio accumulative when absorbed by the human body through perspiration and give cause for concern in health terms such as chronic toxicity, allergenic reactions and cancer. Metals are commonly used in pigments, dyes, heat stabilizers, leather tanning, surface treatments, pesticides, and catalysts. They can commonly be found in natural fibers, synthetic fibers, natural leather, synthetic leather, plastics, rubber, paints, surface coatings and metal trims – almost any material.
Arsenic (As)	7440-38-2			< 0.2 mg/kg	
Cadmium (Cd)	7440-43-9			< 0.1 mg/kg	
Chromium (Cr)	7440-47-3			< 1 mg/kg	
Cobalt (Co)	7440-48-4			< 1 mg/kg	
Copper (Cu)	7440-50-8			< 25 mg/kg	
Lead (Pb)	7439-92-1			< 0.2 mg/kg	
Mercury (Hg)	7439-97-6			< 0.02 mg/kg	
Nickel (Ni)	7440-02-0			< 1.0 mg/kg	
APPLICABLE FOR LEATHER ITEMS					
Chromium VI (Cr VI)	18540-29-9	EUROPE: REACH Regulation 1907/2006 ANNEX XVII No.47	ISO 17075: 2008 Aging	< 3 mg/kg	

HEAVY METALS, TOTAL CONTENT					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Cadmium and its compounds	7440-43-9	EUROPE: REACH Regulation 1907/2006 ANNEX XVII No.23	EN 1122: 2001 and Acid digestion, AAS/ICP analysis	< 100 mg/kg. Applicable for plastic, coated leather and coated textiles, metal plating and metal trimmings	Many heavy metals are bio accumulative when absorbed by the human body through perspiration and give cause for concern in health terms such as chronic toxicity, allergenic reactions and cancer.
Lead and its compounds	7439-92-1	EUROPE: REACH Regulation 1907/2006 ANNEX XVII No.63 for jewellery and products which can be placed in the mouth by children (e.g buttons, zippers, rivets and polymer materials)	Acid digestion, AAS/ICP analysis	< 90 mg/kg	

HEAVY METALS, RELEASABLE NICKEL					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Nickel	7440-0-20	EUROPE:REACH Regulation 1907/2006 ANNEX XVII No.27	Nickel release EN 1811: 2011 + A1: 2015 and Abrasion of coated items EN 12472: 2005 + A1: 2009	In metal products or parts of products intented to be used for body piercings must not release more than ≤ 0.35 µg nickel per cm² per week Consumer goods such as jewellery, snap fasteners, press buttons, zip fasteners, etc., which can come into contact with the human skin for a longer period must not release more than ≤ 0.88 µg nickel per cm² per week	Nickel can cause extreme allergies.
			EN 16128: 2011	In spectacle frames and sunglasses intended to come into close and prolonged contact with the skin must not release more than ≤ 0.5 µg nickel per cm² per week	

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ORGANOTIN COMPOUNDS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Tributyltin (TBT) + compounds	56573-85-4	EUROPE: Regulation 1907/2006 REACH ANNEX XVII No.20	ISO 17353: 2005 followed by GC-MS analysis	< 1000 mg/kg	Organotin compounds are used as biocides (antibacterials), and/or heat stabilizers in plastics, inks, paints, and heat transfer material. It is also used to prevent unpleasant odours. Damage to liver, kidneys, blood forming processes and disruption of the enzyme system are possible, particularly to children.
Triphenyltin (TPhT)) + compounds	668-34-8				
Dibutyltin (DBT)) + compounds	1002-53-5				
Dioctyltin (DOT) + compounds	15231-44-4				

PERFLUORINATED CHEMICALS AND HER COMPOUNDS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Perfluoroctanesulfonates (PFOS)	2795-39-3 1763-23-1	EUROPE:POP Regulation 850/2004. SWITZERLAND: ORRChem annex 1.16 (Art.3)	Solvent extraction, LC-MS CEN/TS 15968: 2010	≤ 1µg / m²	PFOS can be used as impregnation agents to provide soil, oil and water resistance to textiles and apparels. PFOS is persistent, bioaccumulative, poisonous and possibly carcinogenic. PFOA is mainly used as a surfactant and have the same risk profile as PFOS.
Perfluoroctane acids (PFOA)	335-67-1	NORWAY: Product regulation section 2-31			

PHTHALATES					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	EUROPE: Regulation 1907/2006 REACH ANNEX XVII No.51 a,b,c	Printed or coated textiles: ISO 14389: 2014 Plastics: EN 14372: 2004	< 1000 mg/kg	Phthalates are added to plastics to increase flexibility. In textiles and apparel, phthalates can be found in coated textiles, plastic components, trims and plastisol prints. Phthalates are reprotoxic and can cause birth defects and changes in hormone levels. A complete ban of Phthalates is recommended by NGO's and many retailers.
Dibutyl phthalate (DBP)	84-74-2				
Butylbenzyl phthalate (BBP)	85-68-7				
Di-"isononyl" phthalate (DINP)	28553-12-0 68515-48-0	EUROPE: Regulation 1907/2006 REACH ANNEX XVII No.52 a,b,c			
Di-"isodecyl phthalate (DIDP)	26761-40-0 68515-49-1				
Di-n-octyl phthalate (DNOP)	117-84-0				
Di-isobutyl phthalate (DIBP)	84-69-5	EUROPE: Regulation 1907/2006 Candidate list			
1,2-Benzenedicarboxlic acid, dipentylester, branched and linear	84777-06-0				
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6				
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4				
N-pentyl-isopenyl phthalate (NPIPP)	776297-69-9				
Diisopentylphthalate (DIPP)	605-50-5				
Dipentyl phthalate (DPP)	131-18-0				
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8				
1,2-Benzenedicarboxylic acid. Dihexyl ester. Branched and linear (DHxP)	68515-50-4				
Di-n-hexyl phthalate (DHP)	84-75-3				
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC 201-559-5)	68515-51-5 68648-93-1				

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POLYCYCLIC AROMATIC HYDROCARBONS (PAH'S)					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Benzo(a)pyrene [BaP]	50-32-8	EUROPE: Regulation No. 1272/2013 amending REACH Regulation 1907/2006 ANNEX XVII No.50 (going into force 27 December 2015)	AfPS GS 2014:01 PAH	< 1.0 mg/kg each for clothing, footwear, gloves and sportswear	Rubber or plastic components that come into direct and prolonged contact with the human skin or the oral cavity can cause severe allergenic reactions.
Benzo(a)anthracene	56-55-3				
Chrysene	218-01-9				
Benzo(b)fluoranthene	205-99-2				
Benzo(k)fluoranthene	207-08-9				
Dibenzo(ah)anthracene	53-70-3				
Benzo(e)pyrene	192-97-2				
Benzo(j)fluoranthene	205-82-3				

PVC					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Polyvinylchloride	9002-86-2		Beilstein test	n.d.	The use of PVC is voluntarily restricted because it is claimed that dioxins are produced as a byproduct of vinyl chloride manufacture and from burning of waste PVC.

SOLVENTS VOLATILE ORGANIC COMPOUNDS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
2-Ethoxyethylacetate	111-15-9	EUROPE: Regulation 1907/2006 Candidate list.	Head space GC-MS	< 1000 mg/kg	VOC's are organic chemical compounds that vaporize under normal conditions and enter the atmosphere. Common artificial VOCs include thinners and dry cleaning solvents.
Bis-(2-methoxyethyl) ether	111-96-6				
1-Methyl-2-pyrrolidone	872-50-4				
Trichloroethylene	79-01-6				
1,2,3-Trichloropropane	96-18-4				
1,2-dichloroethane	107-06-2				
DMAC(N,N-Dimethylacetamide)	127-19-5				
DMFa(N,NDimethylformamide)	68-12-2				
Formamide	75-12-7				

OTHER ATTENTION POINTS					
NAME	CASNR.	REGULATION	TEST METHOD	LIMIT	RELEVANCE OF RESTRICTION
Odour			SNV 195651: 1968	No abnormal odour allowed. If odour rating > 3, VOC test to be performed.	

pH value for textiles		Values not within limits can cause skin irritation	ISO 3071: 2005	Contact with the skin: 4.0 – 7.5	pH is a measure of the acidity or basicity of a solution. A solution with pH is 7 is neutral. pH values that do not fall within the specified limits can cause skin irritation.
pH value for leather			ISO 4045: 2008	Contact with the skin: 3.5 – 7.5	