Chem Tec Equipment Company, Inc. REACH and RoHS Substance List

Supplier Declaration for Articles/substances Provided	We declare that information provided in the table below is true and complete to the best of our knowledge and that the articles we provide are compliant to restrictions on substances listed in Annex XVII of REACH.
ECHA webpage: Annex XVII of REACH	http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp?sortby=Name&order=ascending

Supplier Name:CHEM TEC EQUIPMENT CO		**Date:16-SEP-15**
Supplier Address:3077 SW 13TH DRIVE DEERFIELD BEACH FL 33442		**Name of Individual / Contact Phone Providing Detail: RAJEN JAIRAM 954.428.8259**

REACH 1 SVHC List (original list released in 2008)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Anthracene	120-12-7	204-371-1	N		
4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4	N		
Dibutyl phthalate (DBP)	84-74-2	201-557-4	N		
Cobalt dichloride	7646-79-9	231-589-4	N		
Diarsenic pentaoxide	1303-28-2	215-116-9	N		
Diarsenic trioxide	1327-53-3	215-481-4	N		
Sodium dichromate, dihydrate	7789-12-0, 10588-01-9	234-190-3	N		
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	N		
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	N		
Hexabromocyclododecane (HBCDD)	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	247-148-4 and 221-695-9	N		
Alkanes, C10-13, chloro	85535-84-8	287-476-5	N		
(Short Chain Chlorinated Paraffins)					
Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	N		
Lead hydrogen arsenate	7784-40-9	232-064-2	N		
Triethyl arsenate	15606-95-8	427-700-2	N		
Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	N		

N

Substance name	CAS number	EC number	N	Comment	Max % (optional)
Anthracene oil	90640-80-5	292-602-7	N		
Anthracene oil, anthracene paste, distn. lights *	91995-17-4	295-278-5	N		
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	N		
Anthracene oil, anthracene-low	90640-82-7	292-604-8	N		
Anthracene oil, anthracene paste	90640-81-6	292-603-2	N		
Coal tar pitch, high temperature	65996-93-2	266-028-2	N		
2,4-Dinitrotoluene	121-14-2	204-450-0	N		
Diisobutyl phthalate	84-69-5	201-553-2	N		
Lead chromate	7758-97-6	231-846-0	N		
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	N		
Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	N		
Tris(2-chloroethyl)phosphate	115-96-8	204-118-5	N		
(Released March 2010)					
Acrylamide	79-06-1	201-173-7	N		
* Light fractions from distillation					
** All refractory ceramic fibres are covered by index number 650-017-00-8 in Annex VI of the Regulation on Classification, Labelling and Packaging of chemical substances and mixtures, the so called CLP Regulation (Regulation (EC) No 1272/2008).					
*** C.I.: Colour Index					

REACH 3 SVHC Substances (released in July 2010)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)

Trichloroethylene	79-01-6	201-167-4	N		
Boric Acid	10043-35-3	233-139-2	N		
	11113-50-1	234-343-4	N		
Disodium Tetraborate, Anhydrous	1330-43-4	215-540-4	N		
	12179-04-3				
	1303-96-4				
Tetraboron Disodium Heptaoxide, Hydrate	12267-73-1	235-541-3	N		
Sodium Chromate	7775-11.3	231-889-5	N		
Potassium Chromate	7789-00-6	232-140-5	N		
Ammonium Dichromate	7789-09.5	232-143-1	N		
Potassium Dichromate	7778-50-9	231-906-6	N		
REACH 4 SVHC Substances (released in December 2010)					
Do the parts or materials within your supply chain contain any of the following?					
Substance name	**CAS number**	**EC number**	**Substance in use in component/product? Y / N**	**Comment**	**Max % (optional)**
Cobalt(II) sulphate	10124-43-3	233-334-2	N		
Cobalt(II) dinitrate	10141-05-6	233-402-1	N		
Cobalt(II) carbonate	513-79-1	208-169-4	N		
Cobalt(II) diacetate	71-48-7	200-755-8	N		
2-Methoxyethanol	109-86-4	203-713-7	N		
2-Ethoxyethanol	110-80-5	203-804-1	N		
Chromium trioxide	1333-82-0	215-607-8	N		
Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid	7738-94-5 - 13530-68-2	231-801-5 - 236-881-5	N		
REACH 5 SVHC Substances (released in June 2011)					
Do the parts or materials within your supply chain contain any of the following?					
Substance name	**CAS number**	**EC number**	**Substance in use in component/product? Y / N**	**Comment**	**Max % (optional)**
2-Ethoxyethyl acetate	111-15-9	203-839-2	N		
Strontium chromate	7789-06-2	232-142-6	N		
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	N		
Hydrazine	302-01-2 / 7803-57-8	206-114-9	N		
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	N		
1,2,3-Trichloropropane	96-18-4	202-486-1	N		
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	N		
REACH 6 SVHC Substances (released in December 2011)					
Do the parts or materials within your supply chain contain any of the following?					
Substance name	**CAS number**	**EC number**	**Substance in use in component/product? Y / N**	**Comment**	**Max % (optional)**
Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight			N		
Calcium arsenate	7778-44-1	231-904-5	N		
Bis(2-methoxyethyl) ether	111-96-6	203-924-4	N		

Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight			N		
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8	N		
Lead dipicrate	6477-64-1	229-335-2	N		
N,N-dimethylacetamide	127-19-5	204-826-4	N		
Arsenic acid	7778-39-4	231-901-9	N		
2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	N		
Trilead diarsenate	3687-31-8	222-979-5	N		
1,2-dichloroethane	107-06-2	203-458-1	N		
Pentazinc chromate octahydroxide	49663-84-5	256-418-0	N		
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	N		
Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	N		
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	N		
Lead diazide, Lead azide	13424-46-9	236-542-1	N		
Phenolphthalein	77-09-8	201-004-7	N		
Dichromium tris(chromate)	24613-89-6	246-356-2	N		
Lead styphnate	15245-44-0	239-290-0	N		
2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	N		

REACH 7 SVHC Substances (released in June 2012)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Î±,Î±-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	229-851-8	**N**		
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michlerâ€™s base)	101-61-1	202-959-2	**N**		
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (Î²-TGIC)	59653-74-6	423-400-0	**N**		
Diboron trioxide	1303-86-2	215-125-8	**N**		
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	**N**		
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	209-218-2	**N**		
Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5	**N**		
Formamide	75-12-7	200-842-0	**N**		
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	208-953-6	**N**		
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	**N**		
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	219-943-6	**N**		
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	**N**		

4,4'-bis(dimethylamino)benzophenone (Michlerâ€™s ketone)	90-94-8	202-027-5	**N**		

REACH 8 SVHC Substances (released in December 2012)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	**N**		
6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	**N**		
Henicosafluoroundecanoic acid	2058-94-8	218-165-4	N		
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	**N**		
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9	**N**		
Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	**N**		
Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	**N**		
Lead dinitrate	10099-74-8	233-245-9	**N**		
Silicic acid, lead salt	11120-22-2	234-363-3	**N**		
4-Aminoazobenzene	60-09-3	200-453-6	**N**		
Lead titanium zirconium oxide	12626-81-2	235-727-4	**N**		
Lead monoxide (lead oxide)	1317-36-8	215-267-0	**N**		
o-Toluidine	95-53-4	202-429-0	**N**		
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	**N**		
Silicic acid (H₂Si₂O₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for â€™toxicity for reproductionâ€™ Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	272-271-5	**N**		
Trilead bis(carbonate)dihydroxide	1319-46-6	215-290-6	**N**		
Furan	110-00-9	203-727-3	**N**		
N,N-dimethylformamide	68-12-2	200-679-5	N		
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	N		
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	N		
4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	N		
Diethyl sulphate	64-67-5	200-589-6	N		
Dimethyl sulphate	77-78-1	201-058-1	**N**		

Lead oxide sulfate	12036-76-9	234-853-7	**N**		
Lead titanium trioxide	12060-00-3	235-038-9	**N**		
Acetic acid, lead salt, basic	51404-69-4	257-175-3	**N**		
[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5	**N**		
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	**N**		
N-methylacetamide	79-16-3	201-182-6	**N**		
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	**N**		
1,2-Diethoxyethane	629-14-1	211-076-1	**N**		
Tetralead trioxide sulphate	12202-17-4	235-380-9	N		
N-pentyl-isopentylphthalate	776297-69-9	-	N		
Dioxobis(stearato)trilead	12578-12-0	235-702-8	N		
Tetraethyllead	78-00-2	201-075-4	N		
Pentalead tetraoxide sulphate	12065-90-6	235-067-7	N		
Pentacosafluorotridecanoic acid	72629-94-8	276-745-2	N		
Tricosafluorododecanoic acid	307-55-1	206-203-2	N		
Heptacosafluorotetradecanoic acid	376-06-7	206-803-4	N		
1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	N		
Methoxyacetic acid	625-45-6	210-894-6	N		
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	N		
Methyloxirane (Propylene oxide)	75-56-9	200-879-2	N		
Trilead dioxide phosphonate	12141-20-7	235-252-2	N		
o-aminoazotoluene	97-56-3	202-591-2	N		
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	N		
4,4'-oxydianiline and its salts	101-80-4	202-977-0	N		
Orange lead (lead tetroxide)	1314-41-6	215-235-6	N		
Biphenyl-4-ylamine	92-67-1	202-177-1	N		
Diisopentylphthalate	605-50-5	210-088-4	N		
Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	N		
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	N		
Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	N		
Lead cyanamidate	20837-86-9	244-073-9	N		

REACH 9 SVHC Substances (released in June 20 2013)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Cadmium	7440-43-9	231-152-8	No		
Cadmium oxide	1306-19-0	215-146-2	No		
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	N		
Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	N		
Dipentyl phthalate (DPP)	131-18-0	205-017-9	N		
4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	-	**No**		

REACH 10 SVHC Substances (released in December 18 2013)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Cadmium sulphide	1306-23-6	215-147-8	NO		

Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4	NO		
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	217-710-3	NO		
Dihexyl phthalate	84-75-3	201-559-5	NO		
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	NO		
Lead di(acetate)	301-04-2	206-104-4	NO		
Trixylyl phosphate	25155-23-1	246-677-8	NO		

REACH 11 SVHC Substances (released in June 16, 2014)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
Cadmium chloride	10108-64-2	233-296-7	NO		
Sodium peroxometaborate	7632-04-4	231-556-4	NO		
Sodium perborate; perboric acid, sodium salt		239-172-9; 234-390-0	NO		
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	NO		

REACH 12 SVHC Substances (released in December 17, 2014)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	NO		
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	NO		
reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	-	NO		
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	NO		
Cadmium fluoride	7790-79-6	232-222-0	NO		
Cadmium sulphate	10124-36-4,31119-53-6	233-331-6	NO		

REACH 13 SVHC Substances (released in June 15, 2015)

Do the parts or materials within your supply chain contain any of the following?

Substance name	CAS number	EC number	Substance in use in component/product? Y / N	Comment	Max % (optional)
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 No. 201-559-5)	68515-51-5 68648-93-1	271-094-0 272-013-1	No		
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]	-	-	No		

Substance name	CAS number	EC number	Reason for proposing	Applications
Anthracene	120-12-7	204-371-1	PBT	Coal tar distillation, manufacture of pyrotechnic products
4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	CMR	hardener for epoxy resins, hardener in adhesives, intermediate in manufacture of high-performance polymers, and processed to be cyclohexaneamine. MDA is produced continuously as a liquid isomer mixture typically contains about 60% 4,4'-MDA
lead hydrogen arsenate	84-74-2	201-557-4	CMR	largest usage as a plasticizer in resins and polymers such as PVC. Softener in adhesives (paper and packaging, wood building, and automobiles industry), softener in prenting inks, sealants, grouting agents, nitrocellulose paints, coatings, glass fibers, and cosmetics, suspension agent for solids in aerosols, lubricant for aerosol valves, an antifoamer, skin emollient, plasticizer in nail polish and fingernail elongators
Cobalt dichloride	7646-79-9	231-589-4	CMR	absorbent for ammonia gas in chemical industry, gas masks, humidity indicator in hygrometers, used in manufacturing vitamin B12, used to add cobalt as nutrients in human and animal food as well as nitrate fertilizers, barometers, self-indicating silica gels, used as flux for magnesium refining, paints on glass surface, solid lubricant for cutting tools, formulation of invisible inks, metal drier in air-drying coatings, drying agent in paints, lacquers, varnishes, printing ink, production of non-ferrus metals (alloy used in aircraft turbines), electroplating processes (galvanoplasty), additive in rubber manufacturing to improve adhesion of rubber with metal (in particular, tire industry), other inorganic chemical products
Diarsenic pentaoxide	1303-28-2	215-116-9	CMR	Used in the dying industry, metallurgy to harden copper lead or gold in alloys, manufacturing special glass, wood preservatives
Diarsenic trioxide	1327-53-3	215-481-4	CMR	Used as decolorizing agent for glass and enamels. Used as refining and oxidizing agent for manufacturing special glass and lead crystal formulations. Was used in Europe as wood preservative. Used as a hydrogen recombination poison for metallurgical studies. Used as a starting point for the preparation of elemental arsenic, arsenic alloys and arsenide semiconductors.
Sodium dichromate, dihydrate	7789-12-0, 10588-01-9	234-190-3	CMR	used in manufacture of hexavalent and trivalent chromium compounds, metal finishing and corrosion resistance
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	vPvB	fragrance ingredients in perfumes, soaps, detergents, and cosmetics
Bis (2-ethyl(hexyl)phthalate) (DEHP)	117-81-7	204-211-0	CMR	Coil coated roofing, fabric coating, floor and wall coating, cable, foil, profiles, toys, printing inks, fillers, PVC, building plate, car undercoating, tarpaulins, medical devices
Hexabromocyclododecane (HBCDD)	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	247-148-4 and 221-695-9	PBT	Expandable polystyrene for packaging material, insulation boards in transport vehicles, buildings, road and railway embankments. Extruded polystyrene insulation High impact polystyrene - electric housings for VCR, EEE distribution boxes for electrical lines Textile coating on upholstery fabric, bed mattress ticking, upholstery furniture and seating, roller blinds, automobile interior textiles
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	PBT	Flame retardant in textiles and rubber, Metal working lubricants, rubber, paint, sealants, adhesives
Bis(tributyltin)oxide	56-35-9	200-268-0	PBT	Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, anti-fungal agent, paint, pigment, antistaining, refrigerant, foaming agent, extingishant
Lead hydrogen arsenate	7784-40-9	232-064-2	CMR	Previously used as a pesticide
Triethyl arsenate	15606-95-8	427-700-2	CMR	May be used in semiconductor industry, fabrication of integrated circuits
Benzyl butyl phthalate	85-68-7	201-622-7	CMR	Plasticizer of PVC or other polymers, sealants, adhesives, paints, inks and lacquers

Substance name	CAS number	EC number	Reason for proposing	Applications
Anthracene oil	90640-80-5	292-602-7	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2	The substances are mainly used in the manufacture of other substances such as anthracene and carbon black. They may also be used as reducing agents in blast furnances, as components in bunker fuel, for impregnating, sealing and corrosion protection.
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2. Mutagen, category 2	
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2. Mutagen, category 2	
Anthracene oil, anthracene-low	90640-82-7	292-604-8	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2. Mutagen, category 2	
Anthracene oil, anthracene paste	90640-81-6	292-603-2	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2. Mutagen, category 2	
Coal tar pitch, high temperature	65996-93-2	266-028-2	Persistent,bioaccumulative and toxic; Very persistent and very bioaccumulative; Carcinogen, category 2	Pitch, coal tar, high temp. is mainly used in the production of electrodes for industrial applications. Smaller volumes are dedicated to specific uses such as heavy duty corrosion protection, special purpose paving, manufacture of other substances and the production of clay targets.
Acrylamide	79-06-1	201-173-7	Carcinogen, category 2; Mutagen, category 2	Acrylamide is almost exclusively used for the synthesis of polyacrylamides, which are used in various applications, in particular in waste water treatment and paper processing. Minor uses of acrylamide comprise the preparation of polyacrylamide gels for research purposes and as grouting agents in civil engineering.
2,4-Dinitrotoluene	121-14-2	204-450-0	Carcinogen, category 2	2,4-dinitrotoluene is used in the production of toluene diisocyanate, which is used for the manufacture of flexible polyurethane foams. The substance is also used as gelatinizing-plasticizing agent for the manufacture of explosive mixtures (e.g. for airbags in cars).
Diisobutyl phthalate	84-69-5	201-553-2	Toxic for reproduction, category 2	Diisobutyl phthalate is used as plasticiser for nitrocellulose, cellulose ether, polyacrylate and polyacetate dispersions, and as a gelling aid in combination with other plasticisers, which are widely used for plastics, lacquers, adhesives, explosive material and nail polish.
Lead chromate	7758-97-6	231-846-0	Carcinogen, category 2. Toxic for reproduction, category 1	Lead chromate is used for manufacturing pigments and dyes, as a pigment or coating agent in industrial and maritime paint products or for embalming/restoring of art products. Further potential uses include as detergents and bleaches, photosensitive materials and for the manufacture of pyrotechnic powder.
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)***	12656-85-8	235-759-9	Carcinogen, category 2. Toxic for reproduction, category 1	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries. Applications comprise the production of agricultural equipment, vehicles and aircraft as well as road and airstrip painting.
Lead sulfochromate yellow (C.I. Pigment Yellow 34)***	1344-37-2	215-693-7	Carcinogen, category 2. Toxic for reproduction, category 1	Lead sulfochromate yellow (C.I. Pigment Yellow 34) is used as a colouring, painting and coating agent in sectors such as the rubber, plastic and paints, coatings and varnishes industries. Applications comprise the production of agricultural equipment, vehicles and aircraft as well as road and airstrip painting. The substance is further used for camouflage or ammunition marking in the defence area.
Tris(2- chloroethyl)phosphate	115-96-8	204-118-5	Toxic for reproduction, category 2	tris(2-chloroethyl)phosphate is mainly used as an additive plasticiser and viscosity regulator with flame-retarding properties for acrylic resins, polyurethane, polyvinyl chloride and other polymers. Other fields of application are adhesives, coatings, flame resistant paints and varnishes. The main industrial branches to use TCEP are the furniture, the textile and the building industry.

Substance name	CAS number	EC number	Reason for proposing	Applications
Trichloroethylene	79-01-6	201-167-4	carcinogen, category 2	Trichlororethylene is mainly used as intermediate in the manufacture of chlorinated and fluorinated organic compounds. Other uses are for cleaning and degreasing of metal parts or as solvent in adhesives.
Boric acid	10043-35-3 11113-50-1	233-139-2 234-343-4	toxic for reproduction, category 2	Boric acid is widely used on account of its consistency-influencing, flame-retarding, antiseptic and preservative properties. It is a component of detergents and cleaners, adhesives, toys, industrial fluids, brake fluids, glass, ceramics, flame retardants, paints, disinfectants, cosmetics, food additives, fertilisers, insecticides and other products.
Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	215-540-4	toxic for reproduction, category 2	Disodium tetraborate and tetraboron disodium heptaoxide form the same compounds in aqueous solutions.Uses include a multitude of applications, e.g. in detergents and cleaners, in glass and glass fibres, ceramics, industrial fluids, metallurgy, adhesives, flame retardants, personal care products, biocides, fertilisers.
Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	toxic for reproduction, category 2	
Sodium chromate	11/3/75	231-889-5	carcinogen, category 2; mutagen, category 2; toxic for reproduction, category 2	Sodium chromate is mainly used as an intermediate in the manufacture of other chromium compounds as well as a laboratory analytical agent, but this use is limited. Other potential uses are mentioned in the literature but whether they occur in the EU is not clear.
Potassium chromate	7789-00-6	232-140-5	carcinogen, category 2; mutagen, category 2	Potassium chromate is used as a corrosion inhibitor for treatment and coating of metals, for manufacture of reagents, chemicals and textiles, as a colouring agent in ceramics, in the manufacture of pigments/inks and in the laboratory as analytical agent.
Ammonium dichromate	9/5/89	232-143-1	carcinogen, category 2; mutagen, category 2; toxic for reproduction, category 2	Ammonium dichromate is mainly used as an oxidising agent. Other known uses are in the manufacture of photosensitive screens and as mordant in the manufacture of textiles. Minor uses seem to comprise metal treatment and laboratory analytical agent.
Potassium dichromate	7778-50-9	231-906-6	carcinogen, category 2; mutagen, category 2; toxic for reproduction, category 2	Potassium dichromate is used for chrome metal manufacturing and as corrosion inhibitor for treatment and coating of metals. It is further used as textile mordant, as laboratory analytical agent, for cleaning of laboratory glassware, in the manufacture of other reagents and as oxidising agent in photolithography.

Substance name	CAS number	EC number	Reason for proposing	Applications
Cobalt(II) sulphate	10124-43-3	233-334-2	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	Cobalt(II) sulphate is mainly used in the manufacture of other chemicals including pigments and possibly catalysts, driers. Further applications comprise surface treatments (such as electroplating), corrosion prevention, decolourisation (in glass, pottery), in batteries, animal food supplements and soil fertilisers.
Cobalt(II) dinitrate	10141-05-6	233-402-1	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	Cobalt(II) dinitrate is mainly used in the manufacture of other chemicals including catalysts. Further applications may include surface treatment and in batteries.
Cobalt(II) carbonate	513-79-1	208-169-4	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	Cobalt(II) carbonate is mainly used in the manufacture of catalysts. Minor uses may include as a feed additive, in the manufacture of other chemicals including pigments, and as an adhesive in ground coat frit.
Cobalt(II) diacetate	71-48-7	200-755-8	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	Cobalt(II) diacetate is mainly used in the manufacture of catalysts or as a catalyst. Minor uses may include the manufacture of other chemicals including pigments, surface treatments, in alloys, dyes, rubber adhesion, and as a feed additive.
2-Methoxyethanol	109-86-4	203-713-7	Toxic for reproduction (article 57c)	2-methoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.
2-Ethoxyethanol	110-80-5	203-804-1	Toxic for reproduction (article 57c)	2-ethoxyethanol is mainly used as a chemical intermediate. Further minor uses are as a solvent or a laboratory chemical.
Chromium trioxide	1333-82-0	215-607-8	Carcinogenic and mutagenic (articles 57 a and 57 b)	Chromium trioxide is mainly used in metal finishing, such as electroplating (e.g. hard chrome and decorative plating), conversion coatings and brightening. It is also used as a fixing agent in waterborne wood preservatives. Minor uses are e.g. in the manufacture of pigments and paints, in catalyst and detergent manufacture, and as an oxidising agent.
Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid	7738-94-5 - 13530-68-2	231-801-5 - 236-881-5	Carcinogenic (article 57a)	Acids generated from chromium trioxide and their oligomers are mainly used in metal finishing, such as electroplating (e.g. hard chrome and decorative plating), conversion coatings and brightening. It is also used as a fixing agent in waterborne wood preservatives. Minor uses are e.g. in the manufacture of pigments and paints, in catalyst and detergent manufacture, and as an oxidising agent.

Substance name	CAS number	EC number	Reason for proposing	Applications
2-Ethoxyethyl acetate	111-15-9	203-839-2	Toxic for reproduction (article 57c)	No registration for 2-ethoxyethylacetate has been submitted to ECHA. Hence the substance seems not to be manufactured in or imported to the EU in quantities above 1 t/y. Main uses in the past were as solvent in coatings and in the chemical industry, but also as intermediate in the manufacture of cyanoacrylate adhesives.
Strontium chromate	6/2/89	232-142-6	Carcinogenic (article 57a)	Strontium chromate is mainly used as corrosion inhibitor in coating mixtures used in the aeronautic/aerospace sector, in the coil coating sector of steel and aluminium and in the vehicle coating sector.
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	Toxic for reproduction (article 57c)	No registration for DHNUP has been submitted to ECHA. Hence the substance seems not to be manufactured in or imported to the EU in quantities above 1 t/y. Main uses in the past were as plasticiser in PVC, foam, adhesives and coatings.
Hydrazine	302-01-2 / 7803-57-8	206-114-9	Carcinogenic (article 57a)	Hydrazine is mainly used as intermediate in the manufacture of hydrazine derivatives, as a monomer in polymerisations, as a corrosion inhibitor in water treatment and for metal reduction and refining of chemicals. It is also used as a propellant for aerospace vehicles and as fuel in military (emergency) power units.
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	Toxic for reproduction (article 57c)	1-methyl-2-pyrrolidone is mainly used as solvent in coatings, cleaning products, for electronic equipment manufacture, as well as in semiconductor industry, petrochemical processing, pharmaceuticals and agrochemicals.
1,2,3-Trichloropropane	96-18-4	202-486-1	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	1,2,3-trichloropropane is mainly used as intermediate in the manufacture of chlorinated solvents and agricultural products. It is also used as monomer. In the past 1,2,3-trichloropropane was used as solvent, paint and varnish remover and as degreasing agent.
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	Toxic for reproduction (article 57c)	No registration for DIHP has been submitted to ECHA. Hence the substance seems not to be manufactured in or imported to the EU in quantities above 1 t/y. Main uses in the past were as plasticiser in PVC and in sealants, coatings and potentially printing inks.

Substance name	CAS number	EC number	Reason for proposing	Applications
Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight			Carcinogenic (article 57 a)	As furnace insulation, exhaust gas cleaning systems (industrial and automotive), in metal matrix composites (fibre reinforced metals). Used in heat shields and fire protection. Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (buildings and industrial process equipment).
Calcium arsenate	7778-44-1	231-904-5	Carcinogenic (article 57 a)	Arsenic acid calcium salt;calcium orthoarsenate; tricalcium;arsenate;
Bis(2-methoxyethyl) ether	111-96-6	203-924-4	Toxic for reproduction (article 57 c)	Solvent for battery electrolytes (lithium ion and other). Possibly in other products such as sealants, adhesives, fuels and automotive care products.
Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight			Carcinogenic (article 57 a)	As furnace insulation, exhaust gas cleaning systems (industrial and automotive), in metal matrix composites (fibre reinforced metals). Used in heat shields and fire protection. Refractory ceramic fibres are used for high-temperature insulation, almost exclusively in industrial applications (insulation of industrial furnaces and equipment, equipment for the automotive and aircraft/aerospace industry) and in fire protection (buildings and industrial process equipment).
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8	Carcinogenic (article 57 a)	Mainly used in primer coatings in the vehicle and aeronautic / aerospace sectors as corrosion inhibitor.
Lead dipicrate	6477-64-1	229-335-2	Toxic for reproduction (article 57 c)	Explosive: used as initiator in detonators.
N,N-dimethylacetamide	127-19-5	204-826-4	Toxic for reproduction (article 57 c)	Solvent used in industrial processes such as for polymers, resins, gums, and electrolytes. May be used as a paint remover.
Arsenic acid	7778-39-4	231-901-9	Carcinogenic (article 57 a)	Said to be mainly used to remove gas bubbles from ceramic glass melt and in the production of laminated printed circuit boards but this is thought to very unusual nowadays
2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	Carcinogenic (article 57 a)	The main part of manufactured and imported o-anisidine in the EU was processed to azo pigments. These were mainly used in printing inks for packing materials like paper, cardboard, polymer and aluminum foil.
Trilead diarsenate	3687-31-8	222-979-5	Carcinogenic and toxic for reproduction (articles 57 a and 57 c)	Some of the arsenic from the trilead diarsenate ultimately ends up in diarsenic trioxide, and trilead diarsenate may according to the Arsenic Consortium (2011) be considered an intermediate in the production of diarsenic trioxide.
1,2-dichloroethane	107-06-2	203-458-1	Carcinogenic (article 57 a)	Industrial solvent e.g. degreaser and paint remover and as the precursor to PVC.
Pentazinc chromate octahydroxide	49663-84-5	256-418-0	Carcinogenic (article 57 a)	Mainly used in primer coatings in the vehicle and aeronautic / aerospace sectors as corrosion inhibitor.
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	Carcinogenic (article 57 a)	Epoxy resin hardener and in adhesives.
Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	Toxic for reproduction (article 57 c)	Plasticiser in polymeric materials and paints, lacquers and varnishes, including printing inks. Not registered so <1 tpa used in EU but may occur in imported products.
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	Equivalent level of concern having probable serious effects to the environment (article 57 f)	Used as a component in adhesives,coatings, inks and rubber articles.
Lead diazide, Lead azide	13424-46-9	236-542-1	Toxic for reproduction (article 57 c),	Explosive: used as initiator in detonators (e.g. fire extinguisher actuator).
Phenolphthalein	77-09-8	201-004-7	Carcinogenic (article 57 a)	Disappearing inks and dyes. pH indicator (e.g. in titration).
Dichromium tris(chromate)	24613-89-6	246-356-2	Carcinogenic (article 57 a)	Metal surface treatment in the aeronautic/aerospace, steel and aluminium coating sectors. Ingredient in chromate passivation solutions (e.g. Alodine 1132)
Lead styphnate	15245-44-0	239-290-0	Toxic for reproduction (article 57 c)	Explosive: used as initiator in detonators (e.g. small calibre ammunition)
2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	Carcinogenic (article 57 a)	Hardener for epoxy resin and polyurethane adhesives.

Substance name	CAS number	EC number	Reason for proposing	Applications
Î±,Î±-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	229-851-8	Carcinogenic (Article 57 a)	Mainly used in the formulation of printing and writing inks, for dyeing paper and in mixtures such as windscreen washing agents.
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michlerâ€™s base)	101-61-1	202-959-2	Carcinogenic (Article 57 a)	Used as an intermediate in the manufacture of dyes and other substances.
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (Î²-TGIC)	59653-74-6	423-400-0	Mutagenic (Article 57 b)	Mainly used as a solder mask ink in the EU. Also used in electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing, coatings, tools, adhesives, lining materials and stabilisers for plastics.
Diboron trioxide	1303-86-2	215-125-8	Toxic for reproduction (Article 57 c)	Used in a multitude of applications, e.g. in glass and glass fibres, frits, ceramics, flame retardants, catalysts, industrial fluids, metallurgy, nuclear, electrical equipment, adhesives, inks/paints, film developing solutions, detergents and cleaners, reagent chemicals, biocides and insecticides.
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	Toxic for reproduction (Article 57 c)	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals. Minor uses in brake fluids and repair of motor vehicles.
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	209-218-2	Carcinogenic (Article 57 a)	Used in the formulation of writing inks and potentially other inks, as well as for dyeing a variety of materials.
Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5	Toxic for reproduction (Article 57 c)	Mainly used in plating processes (both electrolytic and electroless) for electronic components (such as printed circuit boards). The substance seems to also be used for batteries in special applications.
Formamide	75-12-7	200-842-0	Toxic for reproduction (Article 57 c)	Mainly used as an intermediate in the manufacture of agrochemicals, pharmaceuticals and industrial chemicals. Minor uses as a solvent, as a laboratory reagent for quality control purposes in forensic laboratories, hospitals, pharmaceutical companies, food and drinks manufacturers and research laboratories. The substance seems to also be used as a plasticiser.
[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	208-953-6	Carcinogenic (Article 57 a)	Used mainly for paper colouring and inks supplied in printer cartridges and ball pens. Further uses include staining of dried plants, use as a marker for increasing the visibility of liquids, staining in microbial and clinical laboratories.
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	Toxic for reproduction (Article 57 c)	Mainly used as a solvent or as a processing aid in the manufacture and formulation of industrial chemicals, including use as an electrolyte solvent in lithium batteries.
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with â‰¥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	219-943-6	Carcinogenic (Article 57 a)	Used in the formulation of inks, cleaners, and coatings, as well as for dyeing paper, packaging, textiles, plastic products, and other types of articles. It is also used in diagnostic and analytical applications.
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	Mutagenic (Article 57 b)	Mainly used as a hardener in resins and coatings. Also used in inks for the printed circuit board industry, electrical insulation material, resin moulding systems, laminated sheeting, silk screen printing coatings, tools, adhesives, lining materials and stabilisers for plastics.
4,4'-bis(dimethylamino)benzophenone (Michlerâ€™s ketone)	90-94-8	202-027-5	Carcinogenic (Article 57 a)	Used as an intermediate in the manufacture of triphenylmethane dyes and other substances. Further potential uses include use as an additive (photosensitiser) in dyes and pigments, in dry film products and as a process chemical in the production of electronic circuit boards.

Substance name	CAS number	EC number	Reason for proposing	Applications
Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	Toxic for reproduction (Article 57 c)	Use in Coatings and paints, thinners, paint removes / Ink and toners Mainly on ceramics products
6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	Carcinogenic (Article 57a)	Intermediate Use
Henicosafluoroundecanoic acid	2058-94-8	218-165-4	vPvB (Article 57 e)	Processing aid in the production of fluoropolymers and fluoroelastomers.Applications: Electrical wire insulation, Specialist circuit boards, Plumbers tape (thread seal tape (TEFLON-Tape)), Waterproof membranes for garments (such a Gore-Tex), Surgical implants, Dental floss, Engine protector additives, Non-stick coatings.
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans-stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Cross linking agent in the manufacture of polymers
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Industrial use as hardener for hepoxy resins
Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	Toxic for reproduction (Article 57 c)	Use in rubber tyres. Dibutyltin (DBT) compounds shall not be used after 1 January 2012 in mixtures and articles for supply to the general public where the concentration in the mixture or the article, or part thereof, is greater than the equivalent of 0,1 % by weight of tin.
Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	Toxic for reproduction (Article 57 c)	Formulation and use for automated and manual electroytic lead plating
Lead dinitrate	10099-74-8	233-245-9	Toxic for reproduction (Article 57 c)	Manuf matches and special explosives; as mordant in dyeing and printing on textiles; mordant for staining horn, mother-of-pearl; oxidizer in dye industry; sensitizer in photography; process engraving, heat stabilizer in nylon
Silicic acid, lead salt	11120-22-2	234-363-3	Toxic for reproduction (Article 57 c)	Stone, plaster, cement, glass and ceramic articles
4-Aminoazobenzene	60-09-3	200-453-6	Carcinogenic (Article 57a)	Intermediate Use
Lead titanium zirconium oxide	12626-81-2	235-727-4	Toxic for reproduction (Article 57 c)	Machinery, mechanical appliances, electrical/electronic articles
Lead monoxide (lead oxide)	1317-36-8	215-267-0	Toxic for reproduction (Article 57 c)	Metal articles, Electrical batteries and accumulators , Paints and pigments
o-Toluidine	95-53-4	202-429-0	Carcinogenic (Article 57a)	Intermediate Use
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	Toxic for reproduction (Article 57 c)	no data
Silicic acid (H₂Si₂O₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for â€™toxicity for reproductionâ€™ Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	272-271-5	Toxic for reproduction (Article 57 c)	Coatings and paints Used for coating glass lamp bulbs
Trilead bis(carbonate)dihydroxide	1319-46-6	215-290-6	Toxic for reproduction (Article 57 c)	Exterior paint pigment, ceramic glazes
Furan	110-00-9	203-727-3	Carcinogenic (Article 57a)	Intermediate Use
N,N-dimethylformamide	68-12-2	200-679-5	Toxic for reproduction (Article 57 c)	organic solvents for the production of synthetic/artificial leather of polyurethane synthesis of polymers like polyacrylonitrile, polyurethane and polyvinylchloride used in plastics, fibers, artificial leather, coatings, elastomers, and enamels use of DMF in electronics used as a reagent and catalyst for syntheses in organic chemistry (pharmaceutical agrochemicals industries) cleaning solvent in the leather or artificial leather industry manufacturing of electrical allocation equipment and circuitry metal industry
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	Equivalent level of concern having probable serious effects to the environment (Article 57 f)	Formulation, Industrial Consumer and professional end-use of paints Emulsifier in finishing agents for covering leather and textiles with a thin polymer film for improved surface properties Use as intermediate for the production of ether sulphates Use in pesticide formulation
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	-	-	Equivalent level of concern having probable serious effects to the environment (Article 57 f)	Washing of imported textiles: Although the use of nonylphenol and nonylphenol ethoxylates for textile production is widely restricted within the EU it is or may be still contained in imported textiles, textiles produced before the restriction was introduced and products produced in compliance with the restriction (using closed processes). · Pulp, paper and board industry: NP is used in paper production as a component of phenolic resins used in coatings, e.g. for carbonless copy paper, and other NP-resins used for printing inks. In the agricultural sector nonylphenol ethoxylates were used as wetting agents in pesticide formulation.Nonylphenol ethoxylates are also used in metal working fluids and lubricating oils.Nonylphenols and their ethoxylates may be used as antioxidants and plasticizers in plastic products
4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	Carcinogenic (Article 57a)	Intermediate Use
Diethyl sulphate	64-67-5	200-589-6	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Intermediate Use
Dimethyl sulphate	77-78-1	201-058-1	Carcinogenic (Article 57a)	Intermediate Use
Lead oxide sulfate	12036-76-9	234-853-7	Toxic for reproduction (Article 57 c)	manufacture of coatings and inks and application of coatings and inks for mirror backing Plastic and metal articles
Lead titanium trioxide	12060-00-3	235-038-9	Toxic for reproduction (Article 57 c)	Machinery, mechanical appliances, electrical/electronic articles , Semiconductors
Acetic acid, lead salt, basic	51404-69-4	257-175-3	Toxic for reproduction (Article 57 c)	Reactive processing aid in : Coatings and paints, thinners, paint removes, Products such as ph-regulators, flocculants, precipitants, neutralisation agents Intermediate Use
[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5	Toxic for reproduction (Article 57 c)	Polymer preparations and compounds Professional use of plastics lead-stabilised plastic materials as an internal structural component of buildings Plastic and metal articles
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	PBT (Article 57 d); vPvB (Article 57 e)	flame retardant which is compatible with a wide variety of plastics/polymers and textiles
N-methylacetamide	79-16-3	201-182-6	Toxic for reproduction (Article 57 c)	approved used in pesticide Solvent Intermediate
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	Toxic for reproduction (Article 57 c)	Manufacture of plastics products
1,2-Diethoxyethane	629-14-1	211-076-1	Toxic for reproduction (Article 57 c)	inert reaction medium, solvent for ester gum, shellac and some resins and oils, organic synthesis (reaction medium), solvent and diluents for detergents, dye solvents in non-grain raising stains
Tetralead trioxide sulphate	12202-17-4	235-380-9	Toxic for reproduction (Article 57 c)	Lead Acid Batteries Polymer preparations and compounds Metal and Plastic Articles Electrical batteries and accumulators
N-pentyl-isopentylphthalate	776297-69-9	-	Toxic for reproduction (Article 57 c)	no data
Dioxobis(stearato)trilead		235-702-8	Toxic for reproduction (Article 57 c)	Polymer preparations and compounds lead-stabilised plastic materials as an internal structural component of buildings Plastic and metal articles
Tetraethyllead	78-00-2	201-075-4	Toxic for reproduction (Article 57 c)	Industrial manufacture, formulation of fuel additives and fuel blends. Professional/customer use of fuel
Pentalead tetraoxide sulphate	12065-90-6	235-067-7	Toxic for reproduction (Article 57 c)	Lead Acid Batteries Polymer preparations and compounds Metal and Plastic Articles Electrical batteries and accumulators
Pentacosafluorotridecanoic acid	72629-94-8	276-745-2	vPvB (Article 57 e)	Processing aid in the production of fluoropolymers and fluoroelastomers.Applications: Electrical wire insulation, Specialist circuit boards, Plumbers tape (thread seal tape (TEFLON-Tape)), Waterproof membranes for garments (such a Gore-Tex), Surgical implants, Dental floss, Engine protector additives, Non-stick coatings.
Tricosafluorododecanoic acid	307-55-1	206-203-2	vPvB (Article 57 e)	Processing aid in the production of fluoropolymers and fluoroelastomers.Applications: Electrical wire insulation, Specialist circuit boards, Plumbers tape (thread seal tape (TEFLON-Tape)), Waterproof membranes for garments (such a Gore-Tex), Surgical implants, Dental floss, Engine protector additives, Non-stick coatings.
Heptacosafluorotetradecanoic acid	376-06-7	206-803-4	vPvB (Article 57 e)	Processing aid in the production of fluoropolymers and fluoroelastomers.Applications: Electrical wire insulation, Specialist circuit boards, Plumbers tape (thread seal tape (TEFLON-Tape)), Waterproof membranes for garments (such a Gore-Tex), Surgical implants, Dental floss, Engine protector additives, Non-stick coatings.
1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	Toxic for reproduction (Article 57 c)	Washing and cleaning products, Extraction agents, intermediate
Methoxyacetic acid	625-45-6	210-894-6	Toxic for reproduction (Article 57 c)	Intermediate Use, cleaning product,air freshener
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	Carcinogenic (Article 57a)	Chain extender and cross-linker, intermediate in organic synthesis of dyes, polymers, especially polyurethanes
Methyloxirane (Propylene oxide)	75-56-9	200-879-2	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Intermediate Use

Trilead dioxide phosphonate	12141-20-7	235-252-2	Toxic for reproduction (Article 57 c)	manufacture of coatings and application of coatings for mirror backing Coatings and paints, thinners, paint removes Polymer preparations and compounds Plastic and Metal articles Electrical batteries and accumulators
o-aminoazotoluene	97-56-3	202-591-2	Carcinogenic (Article 57a)	Dye for coloring oils, fats and waxes
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	Toxic for reproduction (Article 57 c)	no data
4,4'-oxydianiline and its salts	101-80-4	202-977-0	Carcinogenic (Article 57a); Mutagenic (Article 57b)	Intermediate Use
Orange lead (lead tetroxide)	1314-41-6	215-235-6	Toxic for reproduction (Article 57 c)	Plasters and ointments; colorless glass; glaze for faience; flux for porcelain painting, protective paint for iron and steel; oil-color for ship paints, varnishes; coloring rubber; cement for glass, gas and steam pipes; storage batteries; pencils for writing on glass; manuf lead peroxide, matches, in explosive manufacture, Rubber protection, Polymer preparations and compounds
Biphenyl-4-ylamine	92-67-1	202-177-1	Carcinogenic (Article 57a)	detection of sulfates; formerly as rubber antioxidant.
Diisopentylphthalate	605-50-5	210-088-4	Toxic for reproduction (Article 57 c)	manufacture of propellants and explosives. plasticiser for PVC products
Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	Toxic for reproduction (Article 57 c)	Polymer preparations and compounds lead-stabilised plastic materials as an internal structural component of buildings Plastic and metal articles
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	Equivalent level of concern having probable serious effects to human health (Article 57 f)	Blowing agent, aging and bleaching ingredient (photography), foaming agent, catalyst, insulating material, construction material, cement filler, colouring agent, additive
Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	Toxic for reproduction (Article 57 c)	Polymer preparations and compounds Industrial Use of Sulfurous acid, lead salt, dibasic in the manufacture of coatings and inks and application of coatings and inks for mirror backing Plastic and metal articles
Lead cyanamidate	20837-86-9	244-073-9	Toxic for reproduction (Article 57 c)	no data

Substance name	CAS number	EC number	Reason for proposing	Applications
Cadmium	231-152-8	7440-43-9	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Joining and fusable alloys: Electric and electronic, glass, joining metal, Brazing alloys. In articles: Electric contact, wringle free tubes, Nuclear reactor device, Jewelry, Engine and gearbox, Sacrificial anode, Sheets for cable, Jet engine parts, Fire safety devices. Metal coating (anti corrosion/friction reduction) : Iron, Steel, aluminium, Brass Electrode in batteries: Ni-Cd, Ag-Zn
Cadmium oxide	215-146-2	1306-19-0	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (effects on kidney and bone) (Article 57 f)	Metal coating (anti corrosion/friction reduction) : Iron, Steel, aluminium, Brass Electrode in batteries: Ni-Cd, Ag-Zn In products: Heat resistance polymers (Teflon), Ceramic glaze, catalyst, Photo electronics, Colo TV tubes, Veterynary biocides, Laboratory reagents
Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	Processing aid in the production of fluoropolymers and fluoroelastomers. PFOA/APFO might be a residue in PTFE based applications, such as: Electrical wire insulation, Specialist circuit boards, Plumbers tape (thread seal tape (TEFLON-Tape)), Waterproof membranes for garments (such a Gore-Tex), Surgical implants, Dental floss, Engine protector additives, Non-stick coatings. Other indirect PFOA sources are fluorotelomers, which may contain low levels of PFOA as an unintended by-product. Fluorotelomers are used in a numberof products, among others, in fire fighting foam and for surface coating of carpeting, textiles, paper, leather, and ski wax.
Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	Toxic for reproduction (Article 57 c); PBT (Article 57 d)	
Dipentyl phthalate (DPP)	205-017-9	131-18-0	Toxic for reproduction (Article 57 c)	plasticizer in polyvinyl chloride : rubber substitutes, pliable thin sheeting, film finished for textiles, non flammable upholstery, raincoats, tubing, belting, gaskets, shoe soles
4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]	-	-	Equivalent level of concern having probable serious effects to the environment (due to the endocrine disrupting properties of the degradation products) (Article 57 f)	Formulation of paints and Industrial/consumer/professional end-use of paints. Use in emulsion polymerisation and as auxiliaries in waste water treatment processes

Substance name	CAS number	EC number	Reason for proposing	Applications
Cadmium sulphide	1306-23-6	215-147-8	Carcinogenic (Article 57a); Equivalent level of concern having probable serious effects to human health (Article 57 f)	pigments (colouring glass and plastic articles and synthetic fibers), semiconductor (solar cell technology, photo receptor, Colour TV tube, UV detector Xerography), stabilizers (plastic doors, windows and crystal clear roof windows)
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4	Carcinogenic (Article 57a)	Dye for e.g. textile and paper, pH indicator,
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	217-710-3	Carcinogenic (Article 57a)	can be used to: (1) dye cellulose, wool, silk, bast, and hair; (2) print cellulose, wool and silk; (3) dye leather, plastics, vegetable-ivory buttons and wood flour used as a resin filler; (4) stain wool, silk, acetate, nylon, wood and biological materials, (5) produce aqueous inks
Dihexyl phthalate	84-75-3	201-559-5	Toxic for reproduction (Article 57 c)	Used in the making of plastisols that are subsequently used in the manufacture of automobile parts (air filters, battery covers) and dip-moulded products (tool handles, dishwasher baskets). Commercial phthalate substances containing DnHP may be added to the PVC utilised in the manufacture of flooring, canvas tarps, and notebook covers. Substances containing DnHP may also be used in traffic cones, toys, vinyl gloves, weather stripping, flea collars, shoes, and conveyor belts used in food packaging operations
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	Toxic for reproduction (Article 57 c)	used primarily as an accelerator for vulcanizing polychloroprene (neoprene) and polyacrylate rubbers. Main application areas of chloroprene rubber are water sports products and other leisure activity products such as wetsuits, trunks, hoods, gloves and socks, and waders and boots. Also used for many types of bandages and corsets, and as a lining in many types of leisure sandals (prolonged contact with the chloroprene rubber). Chloroprene rubber is also
Lead di(acetate)	301-04-2	206-104-4	Toxic for reproduction (Article 57 c)	Coatings and paints, thinners, paint removers, Fillers, putties, plasters, modelling clay, ink (textile). Manufacture of computer, electronic and optical products, electrical
Trixylyl phosphate	25155-23-1	246-677-8	Toxic for reproduction (Article 57 c)	functional fluid (fire resistant fluids, hydraulic fluids, lubricants, lubricant additives, grease products, metal working fluid) and as flame retardant in the production of plastics. Also used in polyurethane, PVC, TPE as well as for coatings and textiles and in the manufacture of computer, electronic and optical products

Substance name	CAS number	EC number	Reason for proposing	Applications
Cadmium chloride	10108-64-2	233-296-7	Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	The use of cadmium soaps as components of PVC stabilizers is decreasing because of their toxic properties. Solid PVC stabilizers contain cadmium soaps of saturated fatty acids, whereas liquid stabilizers contain soaps of unsaturated or branched, short-chain fatty acids. The soaps act as heat and light stabilizers, and soaps of saturated fatty acids are used as lubricants in the processing of PVC. Unlike other metallic soaps used in the PVC sector, cadmium soaps do not affect transparency and are suitable for hard, transparent PVC products. Intermediate in the production of cadmium-containing stabilizers and pigments. Photography; dyeing and calico printing; in the vacuum tube industry; manufacture of cadmium yellow; galvanoplasty; manufacture of special mirrors; as ice-nucleating agent; as lubricant; in analysis of sulfides to absorb the H2S; in testing for pyridine bases; as fungicide. Ingredient of electroplating baths
Sodium peroxometaborate	7632-04-4	231-556-4	Toxic for reproduction (Article 57 c)	Bleaching straw and other fibers, ivory, sponges, bristles, waxes; in laundering, dentrifices, soaps. Topical antiseptic. pesticide
Sodium perborate; perboric acid, sodium salt		239-172-9; 234-390-0	Toxic for reproduction (Article 57 c)	Sodium perborate tetra and monohydrates are mainly used as bleaching agents in laundry detergents and machine dishwashing products
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (also called Dihexylphthalate, branched and linear)	68515-50-4	271-093-5	Toxic for reproduction (Article 57 c)	The use of the substance in sealant/jointing agents (substance concentration 5-10%) on the US market indicates that the substance can be found in imported articles. The substance has also been declared as a component in engine oil stabilizer (unknown concentration) on the US market (MSDS 2008) and in automotive gear lubricant (substance concentration 0.5 - <5%) on the German market (MSDS 2012). DnHP was not found in a survey of different consumer products (cell phone covers, work gloves/household gloves, sleeping mats, handbags made of synthetic leather, and sneakers) (DK-EPA 2012). In another survey on textile products (swaddling clothes, bathrobe, t-shirts, pantyhose, beach dress, upholstery fabric, carpets) only small amounts (0.01 - 0.03 mg/kg) of DnHP were detected in three products (Pfordt et al. (1999)).

Substance name	CAS number	EC number	Reason for proposing	Applications
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	PBT (Article 57 d); vPvB (Article 57 e)	Phenolic benzotriazoles are used as UV-stabilizers since they can absorb the full spectrum of UVlight: UV-A (320-400 nm) and UV-B (280-320 nm). Beside the group of benzophenones, they are technically the most important UV-absorbers, especially for transparent plastic materials.The reported types of preparations where UV-320 is a constituent are adsorbents used for the manufacture of rubber and plastic products (UV-stabilizer for plastics, polyurethanes, polycarbonates, polyamide, synthetic fibers, epoxy resin base and rubber and constituent in formulations used for coating of surfaces, e.g. cars or special industrial wood coatings)
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	Toxic for reproduction (Article 57 c)	DOTE is used predominantly as heat stabiliser in the PVC production/ To be noted: Dioctyltin compounds are listed in Annex XVII in group 20, n group 20 (organostannic compounds) No 6; they shall not be used after 1 January 2012 in the following articles for supply to, or use by, the general public, where the concentration in the article, or part thereof, is greater that the equivalent of 0.1 % by weight of tin: textile articles intended to come into contact with the skin, gloves, footwear or part of footwear intended to come into contact with the skin, wall and floor coverings, childcare articles, female hygiene products, nappies, two-component room temperature vulcanisation moulding kits. DOTE is included in Annex XVII, Group 30, resulting that DOTE is not allowed to be placed on the market, or used for supply to the general public as substance or in mixtures
reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	-	-	Toxic for reproduction (Article 57 c)	see above (The dioctyltin (DOT) compound DOTE is always manufactured as a reaction mass with the monooctyltin (MOT) compound MOTE (in the following this reaction mass is abbreviated by DOTE:MOTE))
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	PBT (Article 57 d); vPvB (Article 57 e)	Phenolic benzotriazoles are used as UV-stabilizers since they can absorb the full spectrum of UVlight: UV-A (320-400 nm) and UV-B (280-320 nm). Beside the group of benzophenones, they are technically the most important UV-absorbers, especially for transparent plastic materials.UV328 light stabilizer is recommended for applications such as automotive coatings, industrial coatings or wood stains. It is also recommended as a stabilizer for styrene homo- and copolymers, acrylic polymers, unsaturated polyesters, PVC, polyolefins, polyurethanes, polyacetals, polyvinylbutyral, elastomers and adhesives. The recommended dosage for plastics is less than 1% and for coatings between 1 - 3% depending on substrate and performance requirements
Cadmium fluoride	7790-79-6	232-222-0	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Joining and fusable alloys: Electric and electronic, glass, joining metal, Brazing alloys. In articles: Electric contact, wringle free tubes, Nuclear reactor device, Jewelry, Engine and gearbox, Sacrificial anode, Sheets for cable, Jet engine parts, Fire safety devices. Metal coating (anti corrosion/friction reduction) : Iron, Steel, aluminium, Brass Electrode in batteries: Ni-Cd, Ag-Zn Restrictions for cadmium and its compounds are listed in entry number 23 of Annex XVII
Cadmium sulphate	10124-36-4,31119-53-6	233-331-6	Carcinogenic (Article 57 a); Mutagenic (Article 57 b); Toxic for reproduction (Article 57 c); Equivalent level of concern having probable serious effects to human health (Article 57 f)	Joining and fusable alloys: Electric and electronic, glass, joining metal, Brazing alloys. In articles: Electric contact, wringle free tubes, Nuclear reactor device, Jewelry, Engine and gearbox, Sacrificial anode, Sheets for cable, Jet engine parts, Fire safety devices. Metal coating (anti corrosion/friction reduction) : Iron, Steel, aluminium, Brass Electrode in batteries: Ni-Cd, Ag-Zn Restrictions for cadmium and its compounds are listed in entry number 23 of Annex XVII