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Tuesday 17th January, 2017

Dear Customer,

Re: Harwin and the REACH Directive (EC1907/2006).

I can hereby confirm that Harwin are aware of the EC Directive EC1907/2006, known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances).

To the best of our understanding, registration (or pre-registration) is required for companies that either produce or import into the EU any substance in volumes that exceed one tonne per substance per year. Harwin do not exceed this import amount, nor do we produce our own substances, and will therefore not be required to register.

Material Composition data is available for download on a number of Harwin products. To see if the report has already been produced, please [search for the part number](#) on our website, and the Material Composition data is available from the Product Page. Alternatively, search for the first few digits of the part number on our [Legislation Documentation page](#). If you are unable to find the product you require, please contact leadfree@harwin.co.uk.

SVHC (Substances of Very High Concern) declaration.

To the best of our understanding, all active standard Harwin products (those listed as not obsolete in our catalogue or on our website), irrespective of Country of Origin of the final product or materials, do not contain any of the 173 substances included on the Candidate List of Substances of Very High Concern (SVHC list) as it stands updated 12th January 2017. The current list can be found here:

<http://echa.europa.eu/candidate-list-table>

A summary of the list also follows on pages 3 to 7 of this document.

Annex XIV ("Authorisation List") is a subset of the SVHC, and therefore are also not contained in our products or materials.

Annex XVII ("Restriction List").

To the best of our understanding, all active standard Harwin products (those listed as not obsolete in our catalogue or on our website), irrespective of Country of Origin of the final product or materials, either:

- a) do not contain any of the 63 substances included on the Restriction List as it stands updated 13th January 2017, or
- b) the Conditions (as listed against each substance) are not relevant to our final products or materials.



The current list can be found here:

<http://echa.europa.eu/addressing-chemicals-of-concern/restrictions/substances-restricted-under-reach>

A summary of the list also follows on pages 8 to 11 of this document.

If you have any further questions regarding this letter, please do not hesitate to contact me.

Yours faithfully,

A handwritten signature in black ink, which appears to read 'Wendy Preston'.

Mrs Wendy Jane Preston, BEng (Hons)
Technical Marketing Engineer & Legislation Officer
leadfree@harwin.co.uk

CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN (SVHC LIST)

ADDITIONS 12-01-2017

- ❖ 4,4'-isopropylidenediphenol
- ❖ 4-Heptylphenol, branched and linear [*substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof*]
- ❖ Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts [*Nonadecafluorodecanoic acid, Ammonium nonadecafluorodecanoate, Decanoic acid, nonadecafluoro-, sodium salt*]
- ❖ p-(1,1-dimethylpropyl)phenol

ADDITIONS 20-06-2016

- ❖ Benzo[def]chrysene

ADDITIONS 17-12-2015

- ❖ 1,3-propanesultone
- ❖ 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)
- ❖ 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)
- ❖ Nitrobenzene
- ❖ Perfluorononan-1-oic-acid and its sodium and ammonium salts

ADDITIONS 15-06-2015

- ❖ 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559-5)
- ❖ 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*]

ADDITIONS 17-12-2014

- ❖ Bis(2-ethylhexyl) phthalate (DEHP) – updated for additional reason of inclusion
- ❖ 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)
- ❖ 2-ethylhexyl 10-ethyl-4,4-diocyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)
- ❖ Reaction mass of 2-ethylhexyl 10-ethyl-4,4-diocyl-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)
- ❖ 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
- ❖ Cadmium fluoride
- ❖ Cadmium sulphate

ADDITIONS 16-06-2014

- ❖ 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear
- ❖ Cadmium chloride
- ❖ Sodium perborate; perboric acid, sodium salt
- ❖ Sodium peroxometaborate

ADDITIONS 16-12-2013

- ❖ Cadmium sulphide
- ❖ 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)
- ❖ Dihexyl phthalate
- ❖ Imidazolidine-2-thione; (2-imidazoline-2-thiol)
- ❖ Trixylyl phosphate

- ❖ Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)
- ❖ Lead di(acetate)

ADDITIONS 20-06-2013

- ❖ Cadmium
- ❖ Ammonium pentadecafluorooctanoate (APFO)
- ❖ Pentadecafluorooctanoic acid (PFOA)
- ❖ Dipentyl phthalate (DPP)
- ❖ 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]*
- ❖ Cadmium oxide

ADDITIONS 19-12-2012

- ❖ 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]*
- ❖ 6-methoxy-m-toluidine (p-cresidine)
- ❖ 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]*
- ❖ Pyrochlore, antimony lead yellow
- ❖ Henicosfluoroundecanoic acid
- ❖ 4-Aminoazobenzene
- ❖ Silicic acid, lead salt
- ❖ Lead titanium zirconium oxide
- ❖ Lead monoxide (lead oxide)
- ❖ o-Toluidine
- ❖ 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine
- ❖ Dibutyltin dichloride (DBTC)
- ❖ Lead bis(tetrafluoroborate)
- ❖ Lead dinitrate
- ❖ Silicic acid ($\text{H}_2\text{Si}_2\text{O}_5$), barium salt (1:1), lead-doped *[with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' 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]*
- ❖ Trilead bis(carbonate)dihydroxide
- ❖ 4,4'-methylenedi-o-toluidine
- ❖ Diethyl sulphate
- ❖ Dimethyl sulphate
- ❖ N,N-dimethylformamide
- ❖ 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated *[covering well-defined substances and UVCB substances, polymers and homologues]*
- ❖ 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]*
- ❖ Furan
- ❖ Lead oxide sulphate
- ❖ Lead titanium trioxide
- ❖ Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)

- ❖ Dinoseb (6-sec-butyl-2,4-dinitrophenol)
- ❖ 1,2-Diethoxyethane
- ❖ N-methylacetamide
- ❖ Tetralead trioxide sulphate
- ❖ Acetic acid, lead salt, basic
- ❖ [Phthalato(2-)]dioxotrilead
- ❖ Tetraethyllead
- ❖ N-pentyl-isopentylphthalate
- ❖ Pentalead tetraoxide sulphate
- ❖ Heptacosafuorotetradecanoic acid
- ❖ Tricosafuorododecanoic acid
- ❖ 1-bromopropane (n-propyl bromide)
- ❖ Dioxobis(stearato)trilead
- ❖ Pentacosafuorotridecanoic acid
- ❖ Methoxyacetic acid
- ❖ Methyloxirane (Propylene oxide)
- ❖ Trilead dioxide phosphonate
- ❖ o-aminoazotoluene
- ❖ 4-methyl-m-phenylenediamine (toluene-2,4-diamine)
- ❖ Diisopentylphthalate
- ❖ 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear
- ❖ Biphenyl-4-ylamine
- ❖ Fatty acids, C16-18, lead salts
- ❖ Orange lead (lead tetroxide)
- ❖ 4,4'-oxydianiline and its salts
- ❖ Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))
- ❖ Sulfurous acid, lead salt, dibasic
- ❖ Lead cyanamidate

ADDITIONS 18-06-2012

- ❖ α,α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [*with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)*]
- ❖ 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β -TGIC)
- ❖ N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)
- ❖ Diboron trioxide
- ❖ 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)
- ❖ Formamide
- ❖ 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [*with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)*]
- ❖ Lead(II) bis(methanesulfonate)
- ❖ [4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [*with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)*]
- ❖ 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)
- ❖ [4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26) [*with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)*]
- ❖ 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)
- ❖ 4,4'-bis(dimethylamino)benzophenone (Michler's ketone)

ADDITIONS 19-12-2011

- ❖ Phenolphthalein
- ❖ N,N-dimethylacetamide
- ❖ 4-(1,1,3,3-Tetramethylbutyl)phenol
- ❖ Lead diazide, Lead azide
- ❖ Lead dipicrate
- ❖ 1,2-dichloroethane (EDC)
- ❖ Calcium arsenate
- ❖ Dichromium tris(chromate)
- ❖ 2-Methoxyaniline; o-Anisidine
- ❖ Pentazinc chromate octahydroxide
- ❖ 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 ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight.*
- ❖ Arsenic acid
- ❖ Potassium hydroxyoctaoxodizincatedichromate
- ❖ Formaldehyde, oligomeric reaction products with aniline
- ❖ Lead styphnate
- ❖ Bis(2-methoxyethyl) phthalate
- ❖ Trilead diarsenate
- ❖ 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 ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight.*
- ❖ Bis(2-methoxyethyl) ether
- ❖ 2,2'-dichloro-4,4'-methylenedianiline (MOCA)

ADDITIONS 20-06-2011

- ❖ Cobalt dichloride
- ❖ 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
- ❖ Strontium chromate
- ❖ 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters
- ❖ 1-Methyl-2-pyrrolidone
- ❖ 1,2,3-Trichloropropane
- ❖ 2-Ethoxyethyl acetate
- ❖ Hydrazine

ADDITIONS 15-12-2010

- ❖ Cobalt(II) diacetate
- ❖ 2-Ethoxyethanol
- ❖ Cobalt(II) sulphate
- ❖ Acids generated from chromium trioxide and their oligomers: Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid
- ❖ 2-Methoxyethanol
- ❖ Chromium trioxide
- ❖ Cobalt(II) carbonate
- ❖ Cobalt(II) dinitrate

ADDITIONS 18-06-2010

- ❖ Trichloroethylene
- ❖ Potassium dichromate
- ❖ Tetraboron disodium heptaoxide, hydrate
- ❖ Boric acid
- ❖ Ammonium dichromate
- ❖ Sodium chromate
- ❖ Disodium tetraborate, anhydrous
- ❖ Potassium chromate

ADDITION 30-03-2010

- ❖ Acrylamide

ADDITIONS 13-01-2010

- ❖ Lead sulfochromate yellow (C.I. Pigment Yellow 34)
- ❖ Lead chromate molybdate sulphate red (C.I. Pigment Red 104)
- ❖ 2,4-Dinitrotoluene (2,4-DNT)
- ❖ Anthracene oil
- ❖ Anthracene oil, anthracene paste, anthracene fraction
- ❖ Anthracene oil, anthracene-low
- ❖ Diisobutyl phthalate (DIBP)
- ❖ Tris(2-chloroethyl) phosphate
- ❖ Lead chromate
- ❖ Anthracene oil, anthracene paste
- ❖ Pitch, coal tar, high temp.
- ❖ Anthracene oil, anthracene paste, distn. lights

ORIGINAL LIST 28-10-2008

- ❖ Lead hydrogen arsenate
- ❖ Benzyl butyl phthalate (BBP)
- ❖ Bis(2-ethylhexyl)phthalate (DEHP)
- ❖ Bis(tributyltin) oxide (TBTO)
- ❖ 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)
- ❖ Diarsenic trioxide
- ❖ Triethyl arsenate
- ❖ Diarsenic pentaoxide
- ❖ Sodium dichromate
- ❖ Dibutyl phthalate (DBP)

- ❑ 4,4'-Diaminodiphenylmethane (MDA)
- ❑ Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)
- ❑ Anthracene
- ❑ Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified:
Hexabromocyclododecane; 1,2,5,6,9,10-hexabromocyclododecane; Alpha-hexabromocyclododecane; Beta-hexabromocyclododecane; Gamma-hexabromocyclododecane

RESTRICTION LIST (13-01-2017)

SUBSTANCES NOT INCLUDED IN HARWIN PRODUCTS/MATERIALS

- ❖ 1,1,1,2-Tetrachloroethane
- ❖ 1,1,2,2-Tetrachloroethane
- ❖ 1,1,2-Trichloroethane
- ❖ 1,1-Dichloroethene
- ❖ 1,4-Dichlorobenzene
- ❖ 2-naphthylamine and its salts:
Salts of 2-naphthylamine; 2-naphthylammonium acetate; 2-naphthylamine; 2-naphthylammonium chloride.
- ❖ 4-Aminobiphenyl xenylamine and its salts:
4-Aminobiphenyl xenylamine.
- ❖ 4-Nitrobiphenyl
- ❖ Asbestos fibres:
Actinolite; Tremolite; Amosite; Chrysotile; Crocidolite; Anthophyllite.
- ❖ Benzene
- ❖ Benzidine and its salts:
Benzidine; Salts of benzidine.
- ❖ Cadmium and its compounds (see [Europa website](#) for full list) – already covered by RoHS
- ❖ Chloroform
- ❖ Di-μ-oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate C₈H₁₉B₂O₃Sn (DBB)
- ❖ Dimethylfumarate (DMF)
- ❖ Diphenylether, octabromo derivative C₁₂H₂Br₈O
- ❖ Entry 62:
Phenylmercury octanoate; Phenylmercury neodecanoate; Phenylmercury propionate; Phenylmercury acetate; Phenylmercury 2-ethylhexanoate.
- ❖ Monomethyl — tetrachlorodiphenyl methane Trade name: Ugilec 141
- ❖ Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT
- ❖ Monomethyl-dichloro-diphenyl methane Trade name: Ugilec 121, Ugilec 21
- ❖ Organostannic compounds
- ❖ Pentachloroethane
- ❖ Pentachlorophenol and its salts and esters (see [Europa website](#) for full list)
- ❖ Polybromobiphenyls, Polybrominatedbiphenyls (PBB) – already covered by RoHS
- ❖ Polychlorinated terphenyls (PCTs)
- ❖ Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as carcinogen category 1A or 1B (Table 3.1) or carcinogen category 1 or 2 (Table 3.2) and listed as follows (See group members):
Carcinogen category 1B (Table 3.1)/ carcinogen category 2 (Table 3.2) listed in Appendix 2;
Carcinogen category 1A (Table 3.1)/ carcinogen category 1 (Table 3.2) listed in Appendix 1.
- ❖ Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as germ cell mutagen category 1A or 1B (Table 3.1) or mutagen category 1 or 2 (Table 3.2) and listed as follows (See group members):
Mutagen category 1B (Table 3.1)/ mutagen category 2 (Table 3.2) listed in Appendix 4;
Mutagen category 1A (Table 3.1)/ mutagen category 1 (Table 3.2) listed in Appendix 3
- ❖ Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as toxic to reproduction category 1A or 1B (Table 3.1) or toxic to reproduction category 1 or 2 (Table 3.2) and listed as follows (See group members):
Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6;

Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5.

- ❖ Trichlorobenzene

CONDITIONS NOT RELEVANT TO HARWIN PRODUCTS/MATERIALS

- ❖ 2-(2-butoxyethoxy)ethanol (DEGBE)
- ❖ 2-(2-methoxyethoxy)ethanol (DEGME)
- ❖ Acrylamide
- ❖ Ammonium nitrate (AN)
- ❖ Arsenic compounds (see [Europa website](#) for full list)
- ❖ Azocolourants and Azodyes
- ❖ Bisphenol A (4,4'-isopropylidenediphenol)
- ❖ Chloroethene, Chloroethylene (Vinyl chloride)
- ❖ Chromium VI compounds
- ❖ Cyclohexane
- ❖ Dichloromethane
- ❖ Entry 10:
Ammonium hydrogen sulphide; Ammonium polysulphide; Ammonium sulphide.
- ❖ Entry 31:
Creosote, wood; Tar acids, coal, crude; crude phenols; Distillates (coal tar), upper; heavy anthracene oil; Creosote oil - wash oil; Creosote - wash oil; Anthracene oil; Creosote oil, acenaphthene fraction - wash oil; Low temperature tar oil, alkaline - extract residues (coal), low temperature coal tar alkaline; Distillates (coal tar), naphthalene oils - naphthalene oil.
- ❖ Entry 46:
Nonylphenol C₆H₄(OH)C₉H₁₉; Nonylphenol ethoxylates (C₂H₄O)_nC₁₅H₂₄O
- ❖ Entry 9
Benzidine and/or its derivatives; Powder of the roots of Helleborus viridis and Helleborus niger; o-Nitrobenzaldehyde; Wood powder; Soap bark powder (Quillaja saponaria) and its derivatives containing saponines; Powder of the roots of Veratrum album and Veratrum nigrum.
- ❖ Hexachloroethane
- ❖ Inorganic ammonium salts
- ❖ Lead and its compounds (covered separately by RoHS):
Lead compounds; Lead.
- ❖ Lead carbonates:
Trilead-bis(carbonate)-dihydroxide 2PbCO₃-Pb(OH)₂; Neutral anhydrous carbonate (PbCO₃).
- ❖ Lead sulphates:
Lead sulphate PbSO₄; Sulphuric acid, lead salt Pb_x SO₄.
- ❖ Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 (See group members):
*Hazard class 4.1;
Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;
Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;
Hazard class 5.1.*
- ❖ Mercury
- ❖ Mercury compounds
- ❖ Methylenediphenyl diisocyanate (MDI) including the following specific isomers (See group members):
4,4'-Methylenediphenyl diisocyanate, 4,4'-methylenediphenyl diisocyanate; Methylenediphenyl diisocyanate (MDI); 2,4'-Methylenediphenyl diisocyanate; 2,2'-Methylenediphenyl diisocyanate.
- ❖ Nickel and its compounds (applications listed in the Conditions do not cover any electronics components):

Nickel compounds; Nickel.

- ❖ Nonylphenol ethoxylates (C₂H₄O)_nC₁₅H₂₄O:
Nonylphenol, ethoxylated; 4-Nonylphenol, ethoxylated; Nonylphenol, branched, ethoxylated, phosphated; 4-Nonylphenol, branched, ethoxylated; Isononylphenol, ethoxylated; Nonylphenol, branched, ethoxylated.
- ❖ Polycyclic-aromatic hydrocarbons (PAH):
Benzo[a]pyrene (BaP); Dibenzo[a,h]anthracene (DBA_hA); Benzo[a]anthracene (BaA); Chrysen (CHR); Benzo[j]fluoranthene (BjFA); Benzo[b]fluoranthene (BbFA); Benzo[k]fluoranthene (BkFA); Benzo[e]pyrene (BeP).
- ❖ Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not
- ❖ The following phthalates (or other CAS and EC numbers covering the substance) (See group members) [Entry 51]:
Dibutyl phthalate (DBP); Benzyl butyl phthalate (BBP); Bis (2-ethylhexyl) phthalate (DEHP)
- ❖ The following phthalates (or other CAS and EC numbers covering the substance) (See group members) [Entry 52]
Di-n-octyl phthalate (DNOP); 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich; Di-"isononyl" phthalate (DINP); Di-"isodecyl" phthalate (DIDP); 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich.
- ❖ Toluene
- ❖ Tris(2,3 dibromopropyl) phosphate
- ❖ Tris(aziridinyl)phosphin oxide
- ❖ Volatile esters of bromoacetic acids:
Propyl bromoacetate; Butyl bromoacetate; Ethyl bromoacetate; Methyl bromoacetate.