

27<sup>th</sup> July, 2021

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

Harwin is aware of the EC Directive EC1907/2006, known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances).

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.

Full Material Declarations (Material Composition data) are available to download for a number of Harwin products. To see if a FMD has already been produced, please search for the part number [on our website](#), and the FMD (Material Composition data) will be available from the Product Page. If you are unable to find the FMD for the product you require, please contact: [ComplianceTeam@harwin.co.uk](mailto:ComplianceTeam@harwin.co.uk).

## SVHC (Substances of Very High Concern) declaration.

Harwin operate an on-going due diligence programme to check that all active standard Harwin products (listed as not obsolete in our catalogue or on our website) and packaging do not contain any of the 219 substances included on the Candidate List of Substances of Very High Concern (SVHC list), published 8<sup>th</sup> July 2021. **The sole exception is Lead that is contained within certain products.** If used, Lead will be listed in the product's Full Material Declaration (Material Composition data). The current SVHC list can be found here:

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

A summary of the list also follows on pages 3 to 9 of this document.

**Annex XIV** ("Authorisation List") is a subset of the SVHC list, which does not include Lead, and therefore are not contained in our products or materials. The current list can be found here:

<https://echa.europa.eu/authorisation-list>

## Annex XVII ("Restriction List").

Harwin operate an on-going due diligence programme to check all active standard Harwin products (listed as not obsolete in our catalogue or on our website), either:

- a) Do not contain any of the 69 substances included on the Restriction List, published 4<sup>th</sup> June 2021, 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:

<https://echa.europa.eu/substances-restricted-under-reach>

A summary of the list also follows on pages 10 to 12 of this document.

If you have any further questions regarding this letter, please do not hesitate to contact the Harwin Compliance Team at the email address below

A handwritten signature in black ink that reads "M. J. Perry". The signature is fluid and cursive, with a large loop at the end of the name.

Martin J. Perry, BSc(Eng) MSc CEng MIET  
Product Environmental Compliance Consultant  
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## CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN (SVHC LIST)

### ADDITIONS 08-07-2021

- ❖ 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers
- ❖ Orthoboric acid, sodium salt
- ❖ 2,2-bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)
- ❖ Glutaral
- ❖ Medium-chain chlorinated paraffins (MCCP) UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17
- ❖ Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)
- ❖ 1,4-dioxane
- ❖ 4,4'-(1-methylpropylidene)bisphenol

### ADDITIONS 19-01-2021

- ❖ Bis(2-(2-methoxyethoxy)ethyl)ether
- ❖ Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. Wherein C12 is the predominant carbon member of the fatty acyloxy moiety

### ADDITIONS 25-06-2020

- ❖ 1-vinylimidazole
- ❖ 2-methylimidazole
- ❖ Dibutylbis(pentane-2,4-dionate-0,0')tin
- ❖ Butyl 4-hydroxybenzoate (butylparaben)

### ADDITIONS 16-01-2020

- ❖ Diisohexyl phthalate
- ❖ 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone
- ❖ 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one
- ❖ Perfluorobutane sulfonic acid (PFBS) and its salts

### ADDITIONS 16-07-2019

- ❖ 2-methoxyethyl acetate
- ❖ Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with  $\geq 0.1\%$  w/w of 4-nonylphenol, branched and linear (4-NP)
- ❖ 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)
- ❖ 4-tert-butylphenol

### ADDITIONS 15-01-2019

- ❖ 2,2-bis(4'-hydroxyphenyl)-4-methylpentane
- ❖ Benzo[k]fluoranthene
- ❖ Fluoranthene
- ❖ Phenanthrene
- ❖ Pyrene
- ❖ 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one

### ADDITIONS 27-06-2018

- ❖ Benzene-1,2,4-tricarboxylic acid 1,2 anhydride [*trimellitic anhydride; TMA*]
- ❖ Benzo[ghi]perylene

- ❖ Decamethylcyclopentasiloxane [D5]
- ❖ Dicyclohexyl phthalate [DCHP]
- ❖ Disodium octaborate
- ❖ Dodecamethylcyclohexasiloxane [D6]
- ❖ Ethylenediamine [EDA]
- ❖ Lead
- ❖ Octamethylcyclotetrasiloxane [D4]
- ❖ Terphenyl, hydrogenated

## **ADDITIONS 15-01-2018**

- ❖ 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus™") [covering any of its individual anti- and syn-isomers or any combination thereof]
- ❖ 4,4'-isopropylidenediphenol [Bisphenol A; BPA]– updated for additional reason of inclusion
- ❖ Benz[a]anthracene
- ❖ Cadmium carbonate
- ❖ Cadmium hydroxide
- ❖ Cadmium nitrate
- ❖ Chrysene
- ❖ Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear (4-HPbl)]

## **ADDITIONS 07-07-2017**

- ❖ 4,4'-isopropylidenediphenol [Bisphenol A; BPA]– updated for additional reason of inclusion
- ❖ Perfluorohexane-1-sulphonic acid and its salts [PFHxS]

## **ADDITIONS 12-01-2017**

- ❖ 4,4'-isopropylidenediphenol [Bisphenol A; BPA]
- ❖ 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 (EC no.: 206-400-3, CAS no.: 335-76-2); Ammonium nonadecafluorodecanoate (EC no.: 221-470-5, CAS no.: 3108-42-7); Decanoic acid, nonadecafluoro-, sodium salt (EC no.: -, CAS no.: 3830-45-3)]
- ❖ p-(1,1-dimethylpropyl)phenol

## **ADDITION 20-06-2016**

- ❖ Benzo[def]chrysene (Benzo[a]pyrene)

## **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 [Perfluorononan-1-oic-acid (EC no.: 206-801-3, CAS no.: 375-95-1); Sodium salts of perfluorononan-1-oic-acid (EC no.: -, CAS no.: -, 21049-39-8); Ammonium salts of perfluorononan-1-oic-acid (EC no.: -, CAS no.: -, 4149-60-4)]

## **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 ≥0.3% of dihexyl phthalate (EC No. 201-559-5): 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters (EC no.: 272-013-1, CAS no.: 68648-93-1); 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters (EC no.: 271-094-0, CAS no.: 68515-51-5)]

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- ❖ 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: 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane (EC no.: -, CAS no.: -); 5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane (EC no.: -, CAS no.: -)]

## **ADDITIONS 17-12-2014**

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

## **ADDITIONS 16-06-2014**

- ❖ 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear
- ❖ Cadmium chloride
- ❖ Sodium perborate; perboric acid, sodium salt [Perboric acid, sodium salt (EC no.: 234-390-0, CAS no.: 11138-47-9); Sodium perborate (EC no.: 239-172-9, CAS no.: 15120-21-5)]
- ❖ Sodium peroxometaborate

## **ADDITIONS 16-12-2013**

- ❖ Cadmium sulphide
- ❖ Dihexyl phthalate
- ❖ Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)
- ❖ 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)
- ❖ Imidazolidine-2-thione; (2-imidazoline-2-thiol)
- ❖ Lead di(acetate)
- ❖ Trixylyl phosphate

## **ADDITIONS 20-06-2013**

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

## **ADDITIONS 19-12-2012**

- ❖ 1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear
- ❖ 1,2-Diethoxyethane
- ❖ 1-bromopropane (n-propyl bromide)
- ❖ 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine
- ❖ 4,4'-methylenedi-o-toluidine
- ❖ 4,4'-oxydianiline and its salts [4,4'-oxydianiline (EC no.: 202-977-0, CAS no.: 101-80-4)]

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- ❖ 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]
- ❖ 4-aminoazobenzene
- ❖ 4-methyl-m-phenylenediamine (toluene-2,4-diamine)
- ❖ 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]
- ❖ 6-methoxy-m-toluidine (p-cresidine)
- ❖ [Phthalato(2-)]dioxotrilead
- ❖ Acetic acid, lead salt, basic
- ❖ Biphenyl-4-ylamine
- ❖ Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)
- ❖ Cyclohexane-1,2-dicarboxylic anhydride [all possible combinations of the cis- and trans-isomers: trans-cyclohexane-1,2-dicarboxylic anhydride (EC no.: 238-009-9, CAS no.: 14166-21-3); cis-cyclohexane-1,2-dicarboxylic anhydride (EC no.: 236-086-3, CAS no.: 13149-00-3); Cyclohexane-1,2-dicarboxylic anhydride (EC no.: 201-604-9, CAS no.: 85-42-7)]
- ❖ Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)
- ❖ Dibutyltin dichloride (DBTC)
- ❖ Diethyl sulphate
- ❖ Diisopentyl phthalate
- ❖ Dimethyl sulphate
- ❖ Dinoseb (6-sec-butyl-2,4-dinitrophenol)
- ❖ Dioxobis(stearato)trilead
- ❖ Fatty acids, C16-18, lead salts
- ❖ Furan
- ❖ Henicosaflluoroundecanoic acid
- ❖ Heptacosaflluorotetradecanoic acid
- ❖ Hexahydromethylphthalic anhydride [including cis- and trans- stereo isomeric forms and all possible combinations of the isomers: Hexahydro-4-methylphthalic anhydride (EC no.: 243-072-0, CAS no.: 19438-60-9); Hexahydro-3-methylphthalic anhydride (EC no.: 260-566-1, CAS no.: 57110-29-9); Hexahydro-1-methylphthalic anhydride (EC no.: 256-356-4, CAS no.: 48122-14-1); Hexahydromethylphthalic anhydride (EC no.: 247-094-1, CAS no.: 25550-51-0)]
- ❖ Lead bis(tetrafluoroborate)
- ❖ Lead cyanamidate
- ❖ Lead dinitrate
- ❖ Lead monoxide (lead oxide)
- ❖ Lead oxide sulphate
- ❖ Lead titanium trioxide
- ❖ Lead titanium zirconium oxide
- ❖ Methoxyacetic acid
- ❖ Methyloxirane (Propylene oxide)
- ❖ N,N-dimethylformamide
- ❖ N-methylacetamide
- ❖ N-pentyl-isopentylphthalate
- ❖ o-aminoazotoluene
- ❖ o-toluidine
- ❖ Orange lead (lead tetroxide)
- ❖ Pentacosaflluorotridecanoic acid

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- ❖ Pentalead tetraoxide sulphate
- ❖ Pyrochlore, antimony lead yellow
- ❖ Silicic acid (H<sub>2</sub>Si<sub>2</sub>O<sub>5</sub>), 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]
- ❖ Silicic acid, lead salt
- ❖ Sulfurous acid, lead salt, dibasic
- ❖ Tetraethyllead
- ❖ Tetralead trioxide sulphate
- ❖ Tricosafuorododecanoic acid
- ❖ Trilead bis(carbonate)dihydroxide
- ❖ Trilead dioxide phosphonate

## **ADDITIONS 18-06-2012**

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

## **ADDITIONS 19-12-2011**

- ❖ 1,2-dichloroethane
- ❖ 2,2'-dichloro-4,4'-methylenedianiline (MOCA)
- ❖ 2-Methoxyaniline; o-Anisidine
- ❖ 4-(1,1,3,3-tetramethylbutyl)phenol
- ❖ 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 (Na<sub>2</sub>O+K<sub>2</sub>O+CaO+MgO+BaO) content less or equal to 18% by weight.]
- ❖ Arsenic acid
- ❖ Bis(2-methoxyethyl) ether
- ❖ Bis(2-methoxyethyl) phthalate

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- ❖ Calcium arsenate
- ❖ Dichromium tris(chromate)
- ❖ Formaldehyde, oligomeric reaction products with aniline
- ❖ Lead diazide, Lead azide
- ❖ Lead dipicrate
- ❖ Lead styphnate
- ❖ N,N-dimethylacetamide
- ❖ Pentazinc chromate octahydroxide
- ❖ Phenolphthalein
- ❖ Potassium hydroxyoctaoxidizincatedichromate
- ❖ Trilead diarsenate
- ❖ 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 ( $\mu\text{m}$ );*
  - 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.]*

## **ADDITIONS 20-06-2011**

- ❖ Cobalt dichloride – updated for additional reason of inclusion
- ❖ 1,2,3-trichloropropane
- ❖ 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
- ❖ 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters
- ❖ 1-Methyl-2-pyrrolidone (NMP)
- ❖ 2-ethoxyethyl acetate
- ❖ Hydrazine
- ❖ Strontium chromate

## **ADDITIONS 15-12-2010**

- ❖ 2-ethoxyethanol
- ❖ 2-methoxyethanol
- ❖ Acids generated from chromium trioxide and their oligomers [*Dichromic acid (EC no.: 236-881-5, CAS no.: 7738-94-5); Oligomers of chromic acid and dichromic acid (EC no.: -, CAS no.: -); Chromic acid (EC no.: 231-801-5, CAS no.: 13530-68-2)*]
- ❖ Chromium trioxide
- ❖ Cobalt(II) carbonate
- ❖ Cobalt(II) diacetate
- ❖ Cobalt(II) dinitrate
- ❖ Cobalt(II) sulphate

## **ADDITIONS 18-06-2010**

- ❖ Ammonium dichromate
- ❖ Boric acid [*EC No. 233-139-2 and EC No. 234-343-4: Boric acid, crude natural (EC no.: 234-343-4, CAS no.: 11113-50-1); Boric acid (EC no.: 233-139-2, CAS no.: 10043-35-3)*]
- ❖ Disodium tetraborate, anhydrous
- ❖ Potassium chromate



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- ❖ Potassium dichromate
- ❖ Sodium chromate
- ❖ Tetraboron disodium heptaoxide, hydrate
- ❖ Trichloroethylene

## **ADDITION 30-03-2010**

- ❖ Acrylamide

## **ADDITIONS 13-01-2010**

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

## **ORIGINAL LIST 28-10-2008**

- ❖ 4,4'-Diaminodiphenylmethane (MDA)
- ❖ 5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)
- ❖ Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)
- ❖ Anthracene
- ❖ Benzyl butyl phthalate (BBP)
- ❖ Bis(2-ethylhexyl)phthalate (DEHP)
- ❖ Bis(tributyltin) oxide (TBTO)
- ❖ Cobalt dichloride
- ❖ Diarsenic pentaoxide
- ❖ Diarsenic trioxide
- ❖ Dibutyl phthalate (DBP)
- ❖ Hexabromocyclododecane (HBCDD) [*and all major diastereoisomers identified: gamma-hexabromocyclododecane (EC no.: -, CAS no.: 134237-52-8); beta-hexabromocyclododecane (EC no.: -, CAS no.: 134237-51-7); Hexabromocyclododecane (EC no.: 247-148-4, CAS no.: 25637-99-4); 1,2,5,6,9,10-hexabromocyclododecane (EC no.: 221-695-9, CAS no.: 3194-55-6); alpha-hexabromocyclododecane (EC no.: -, CAS no.: 134237-50-6)*]
- ❖ Lead hydrogen arsenate
- ❖ Sodium dichromate
- ❖ Triethyl arsenate

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### SUBSTANCES NOT INCLUDED IN HARWIN PRODUCTS/MATERIALS

- ❖ Octamethylcyclotetrasiloxane (D4); Decamethylcyclopentasiloxane (D5)
- ❖ 1,1,1,2-Tetrachloroethane
- ❖ 1,1,2,2-Tetrachloroethane
- ❖ 1,1,2-Trichloroethane
- ❖ 1,1-Dichloroethene
- ❖ 1,4-Dichlorobenzene
- ❖ 1-methyl-2-pyrrolidone
- ❖ 2-naphthylamine and its salts:  
*Salts of 2-naphthylamine; 2-naphthylammonium acetate; 2-naphthylamine; 2-naphthylammonium chloride.*
- ❖ 4,4'-isopropylidenediphenol
- ❖ 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.*
- ❖ Bis(pentabromophenyl) ether
- ❖ Cadmium and its compounds (see [Europa website](#) for full list) – already covered by RoHS
- ❖ Chloroform
- ❖ Di-μ-oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate C<sub>8</sub>H<sub>19</sub>B<sub>03</sub>Sn (DBB)
- ❖ Dimethylfumarate (DMF)
- ❖ Diphenylether, octabromo derivative C<sub>12</sub>H<sub>2</sub>Br<sub>8</sub>O
- ❖ Entry 62:  
*Phenylmercury octanoate; Phenylmercury neodecanoate; Phenylmercury propionate; Phenylmercury acetate; Phenylmercury 2-ethylhexanoate.*
- ❖ Methanol
- ❖ 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
- ❖ Octamethylcyclotetrasiloxane (D4); Decamethylcyclopentasiloxane (D5)
- ❖ Organostannic compounds
- ❖ Pentachloroethane
- ❖ Pentachlorophenol and its salts and esters (see [Europa website](#) for full list)
- ❖ Perfluorooctanoic acid (PFOA) and its salts
- ❖ 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 C<sub>6</sub>H<sub>4</sub>(OH)C<sub>9</sub>H<sub>19</sub>; Nonylphenol ethoxylates (C<sub>2</sub>H<sub>4</sub>O)<sub>n</sub>C<sub>15</sub>H<sub>24</sub>O*
- ❖ 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 2PbCO<sub>3</sub>-Pb(OH)<sub>2</sub>; Neutral anhydrous carbonate (PbCO<sub>3</sub>).*
- ❖ Lead sulphates:
  - Lead sulphate PbSO<sub>4</sub>; Sulphuric acid, lead salt Pb<sub>2</sub>SO<sub>4</sub>.*
- ❖ 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;*

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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 (C<sub>2</sub>H<sub>4</sub>O)<sub>n</sub>C<sub>15</sub>H<sub>24</sub>O:  
*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<sub>h</sub>A); 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.*