

REACH Compliance Declaration

On December 18, 2006, the European Parliament and the Council of the European Union adopted a regulation on chemical substances, titled Registration, Evaluation, Authorization and Restriction of Chemicals ("REACH"), EC No. 1907/2006. All Allegro parts are not intended to release any substance under normal and reasonable foreseeable conditions of use. Active Allegro parts are compliant with the latest "Candidate List of SVHC for Authorisation" (January 2020 – 205 Substances – listed on the following pages) and do not contain any of these substances in a concentration above 0.1% (w/w). Allegro's parts are also compliant with the latest restrictions detailed in REACH Annex XVII (June 2018 – 68 substances) based on the substance-application use combination(s) detailed in the regulation. For detailed information on the substances used in any of Allegro's parts, please contact your local sales or marketing representative for a material declaration report.

Allegro MicroSystems, LLC is pleased to provide our customers with information regarding the materials used in the manufacturing of our semiconductor products. We value our relationship and appreciate the need for environmental controls. Allegro considers itself to be an environmentally responsible company.

We believe that we are in compliance with all applicable local, state, federal, and international environmental regulations. To the best of our knowledge, applicable hazardous substances are not present, in excess of specified threshold limits, in the parts that Allegro sells.

Allegro takes environmental control seriously and we want to assure our customers that we are doing everything reasonably possible to maintain compliance with all environmental standards. However, because we are not the producer of any of the materials contained in our product, notwithstanding anything to the contrary contained in any document, Allegro shall not be liable, under any theory of law, and shall not be responsible to defend or indemnify any party should any material be out of compliance. We believe the controls we have in place will help to assure that Allegro remains compliant. We remain willing to answer any questions you may have regarding our environmental controls.



Kristian Bonzey

Product and Materials Compliance Analyst

February 14, 2020

| # | Substance Name | CAS # | Concentration Threshold (PPM w/w) | Date of inclusion |
|----|---|------------|-----------------------------------|-------------------|
| 1 | Anthracene | 120-12-7 | 1000 | 2008.10.28 |
| 2 | 4,4'- Diaminodiphenylmethane | 101-77-9 | 1000 | 2008.10.28 |
| 3 | Dibutyl phthalate | 84-74-2 | 1000 | 2008.10.28 |
| 4 | Cobalt dichloride | 7646-79-9 | 1000 | 2008.10.28 |
| 5 | Diarsenic pentaoxide | 1303-28-2 | 1000 | 2008.10.28 |
| 6 | Diarsenic trioxide | 1327-53-3 | 1000 | 2008.10.28 |
| 7 | Sodium dichromate, dihydrate | 10588-01-9 | 1000 | 2008.10.28 |
| 8 | 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) | 81-15-2 | 1000 | 2008.10.28 |
| 9 | Bis (2-ethyl(hexyl)phthalate) (DEHP) | 117-81-7 | 1000 | 2008.10.28 |
| 10 | Hexabromocyclododecane (HBCDD) | 3194-55-6 | 1000 | 2008.10.28 |
| 11 | Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) | 85535-84-8 | 1000 | 2008.10.28 |
| 12 | Bis(tributyltin) oxide,hexabutyldistannoxane | 56-35-9 | 1000 | 2008.10.28 |
| 13 | Lead hydrogen arsenate | 7784-40-9 | 1000 | 2008.10.28 |
| 14 | Triethyl arsenate | 15606-95-8 | 1000 | 2008.10.28 |
| 15 | Benzyl butyl phthalate | 85-68-7 | 1000 | 2008.10.28 |
| 16 | 2,4-Dinitrotoluene | 121-14-2 | 1000 | 2010.1.13 |
| 17 | Anthracene oil | 90640-80-5 | 1000 | 2010.1.13 |
| 18 | Anthracene oil, anthracene paste | 90640-81-6 | 1000 | 2010.1.13 |
| 19 | Anthracene oil, anthracene paste, anthracene fraction | 91995-15-2 | 1000 | 2010.1.13 |
| 20 | Anthracene oil, anthracene paste, distn. lights | 91995-17-4 | 1000 | 2010.1.13 |
| 21 | Anthracene oil, anthracene-low | 90640-82-7 | 1000 | 2010.1.13 |
| 22 | Diisobutyl phthalate | 84-69-5 | 1000 | 2010.1.13 |
| 23 | Lead chromate | 7758-97-6 | 1000 | 2010.1.13 |
| 24 | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) | 12656-85-8 | 1000 | 2010.1.13 |



| # | Substance Name | CAS # | Concentration Threshold (PPM w/w) | Date of inclusion |
|----|---|------------|-----------------------------------|-------------------|
| 25 | Lead sulfochromate yellow (C.I. Pigment Yellow 34) | 1344-37-2 | 1000 | 2010.1.13 |
| 26 | Pitch, coal tar, high temp. | 65996-93-2 | 1000 | 2010.1.13 |
| 27 | Tris(2-chloroethyl)phosphate | 115-96-8 | 1000 | 2010.1.13 |
| 28 | Acrylamide | 79-06-1 | 1000 | 2010.3.30 |
| 29 | Trichloroethylene | 79-01-6 | 1000 | 2010.6.18 |
| 30 | Boric acid | 10043-35-3 | 1000 | 2010.6.18 |
| 31 | Disodium tetraborate, anhydrous | 1330-43-4 | 1000 | 2010.6.18 |
| 32 | Tetraboron disodium heptaoxide, hydrate | 12267-73-1 | 1000 | 2010.6.18 |
| 33 | Sodium chromate | 7775-11-3 | 1000 | 2010.6.18 |
| 34 | Potassium chromate | 7789-00-6 | 1000 | 2010.6.18 |
| 35 | Ammonium dichromate | 7789-09-5 | 1000 | 2010.6.18 |
| 36 | Potassium dichromate | 7778-50-9 | 1000 | 2010.6.18 |
| 37 | 2-Ethoxyethanol | 110-80-5 | 1000 | 2010.12.15 |
| 38 | 2-Methoxyethanol | 109-86-4 | 1000 | 2010.12.15 |
| 39 | Chromic acid | 7738-94-5 | 1000 | 2010.12.15 |
| 40 | Chromium trioxide | 1333-82-0 | 1000 | 2010.12.15 |
| 41 | Cobalt(II) carbonate | 513-79-1 | 1000 | 2010.12.15 |
| 42 | Cobalt(II) diacetate | 71-48-7 | 1000 | 2010.12.15 |
| 43 | Cobalt(II) dinitrate | 10141-05-6 | 1000 | 2010.12.15 |
| 44 | Cobalt(II) sulphate | 10124-43-3 | 1000 | 2010.12.15 |
| 45 | 1,2,3-Trichloropropane | 96-18-4 | 1000 | 2011.6.20 |
| 46 | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | 71888-89-6 | 1000 | 2011.6.20 |
| 47 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters | 68515-42-4 | 1000 | 2011.6.20 |
| 48 | 1-Methyl-2-pyrrolidone | 872-50-4 | 1000 | 2011.6.20 |



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|----|---|----------------------|-----------------------------------|-------------------|
| 49 | 2-Ethoxyethyl acetate | 111-15-9 | 1000 | 2011.6.20 |
| 50 | Hydrazine | 302-01-2 / 7803-57-8 | 1000 | 2011.6.20 |
| 51 | Strontium chromate | 7789-06-2 | 1000 | 2011.6.20 |
| 52 | Dichromium tris(chromate) | 24613-89-6 | 1000 | 2011.12.19 |
| 53 | Potassium hydroxyoctaoxidizincatedi-chromate | 11103-86-9 | 1000 | 2011.12.19 |
| 54 | Pentazinc chromate octahydroxide | 49663-84-5 | 1000 | 2011.12.19 |
| 55 | Aluminosilicate Refractory Ceramic Fibres (RCF) | - | 1000 | 2011.12.19 |
| 56 | Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) | - | 1000 | 2011.12.19 |
| 57 | Formaldehyde, oligomeric reaction products with aniline (technical MDA) | 25214-70-4 | 1000 | 2011.12.19 |
| 58 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 1000 | 2011.12.19 |
| 59 | 2-Methoxyaniline; o-Anisidine | 90-04-0 | 1000 | 2011.12.19 |
| 60 | 4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol) | 140-66-9 | 1000 | 2011.12.19 |
| 61 | 1,2-Dichloroethane | 107-06-2 | 1000 | 2011.12.19 |
| 62 | Bis(2-methoxyethyl) ether | 111-96-6 | 1000 | 2011.12.19 |
| 63 | Arsenic acid | 7778-39-4 | 1000 | 2011.12.19 |
| 64 | Calcium arsenate | 7778-44-1 | 1000 | 2011.12.19 |
| 65 | Trilead diarsenate | 3687-31-8 | 1000 | 2011.12.19 |
| 66 | N,N-dimethylacetamide (DMAC) | 127-19-5 | 1000 | 2011.12.19 |
| 67 | 2,2'-dichloro-4,4'-methylenedianiline (MOCA) | 101-14-4 | 1000 | 2011.12.19 |
| 68 | Phenolphthalein | 77-09-8 | 1000 | 2011.12.19 |
| 69 | Lead azide Lead diazide | 13424-46-9 | 1000 | 2011.12.19 |
| 70 | Lead styphnate | 15245-44-0 | 1000 | 2011.12.19 |
| 71 | Lead dipicrate | 6477-64-1 | 1000 | 2011.12.19 |



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|----|--|------------|-----------------------------------|-------------------|
| 72 | 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)] | 6786-83-0 | 1000 | 2012.6.18 |
| 73 | N,N,N',N'.tetramethyl.4,4'.methylenedianiline (Michler's base) | 101-61-1 | 1000 | 2012.6.18 |
| 74 | 1,3,5.tris[(2S and 2R).2,3.epoxypropyl].1,3,5.triazine.2,4,6.(1H,3H,5H).trione (β .TGIC) | 59653-74-6 | 1000 | 2012.6.18 |
| 75 | Diboron trioxide | 1303-86-2 | 1000 | 2012.6.18 |
| 76 | 1,2.bis(2.methoxyethoxy)ethane (TEGDME; triglyme) | 112-49-2 | 1000 | 2012.6.18 |
| 77 | 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)] | 561-41-1 | 1000 | 2012.6.18 |
| 78 | Lead(II) bis(methanesulfonate) | 17570-76-2 | 1000 | 2012.6.18 |
| 79 | Formamide | 75-12-7 | 1000 | 2012.6.18 |
| 80 | [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)] | 548-62-9 | 1000 | 2012.6.18 |
| 81 | 1,2.dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 1000 | 2012.6.18 |
| 82 | [4.[[4.anilino.1.naphthyl][4.(dimethylamino)phenyl]methylenecyclohexa.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)] | 2580-56-5 | 1000 | 2012.6.18 |
| 83 | 1,3,5.Tris(oxiran.2.ylmethyl).1,3,5.triazinane.2,4,6.trione (TGIC) | 2451-62-9 | 1000 | 2012.6.18 |
| 84 | 4,4'.bis(dimethylamino)benzophenone (Michler's ketone) | 90-94-8 | 1000 | 2012.6.18 |
| 85 | Pyrochlore, antimony lead yellow | 8012-00-8 | 1000 | 2012.12.19 |
| 86 | 6-methoxy-m-toluidine (p-cresidine) | 120-71-8 | 1000 | 2012.12.19 |
| 87 | Henicosafuoroundecanoic acid | 2058-94-8 | 1000 | 2012.12.19 |



| # | Substance Name | CAS # | Concentration Threshold (PPM w/w) | Date of inclusion |
|-----|---|--|-----------------------------------|-------------------|
| 88 | Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] | 25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9 | 1000 | 2012.12.19 |
| 89 | Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] | 85-42-7, 13149-00-3, 14166-21-3 | 1000 | 2012.12.19 |
| 90 | Dibutyltin dichloride (DBTC) | 683-18-1 | 1000 | 2012.12.19 |
| 91 | Lead bis(tetrafluoroborate) | 13814-96-5 | 1000 | 2012.12.19 |
| 92 | Lead dinitrate | 10099-74-8 | 1000 | 2012.12.19 |
| 93 | Silicic acid, lead salt | 11120-22-2 | 1000 | 2012.12.19 |
| 94 | 4-Aminoazobenzene | 60-09-3 | 1000 | 2012.12.19 |
| 95 | Lead titanium zirconium oxide | 12626-81-2 | 1000 | 2012.12.19 |
| 96 | Lead monoxide (lead oxide) | 1317-36-8 | 1000 | 2012.12.19 |
| 97 | o-Toluidine | 95-53-4 | 1000 | 2012.12.19 |
| 98 | 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | 1000 | 2012.12.19 |
| 99 | Silicic acid (H ₂ SiO ₅), barium salt (1:1), lead-doped | 68784-75-8 | 1000 | 2012.12.19 |
| 100 | Trilead bis(carbonate)dihydroxide | 1319-46-6 | 1000 | 2012.12.19 |
| 101 | Furan | 110-00-9 | 1000 | 2012.12.19 |
| 102 | N,N-dimethylformamide | 68-12-2 | 1000 | 2012.12.19 |
| 103 | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated | - | 1000 | 2012.12.19 |
| 104 | 4-Nonylphenol, branched and linear | - | 1000 | 2012.12.19 |
| 105 | 4,4'-methylenedi-o-toluidine | 838-88-0 | 1000 | 2012.12.19 |
| 106 | Diethyl sulphate | 64-67-5 | 1000 | 2012.12.19 |
| 107 | Dimethyl sulphate | 77-78-1 | 1000 | 2012.12.19 |
| 108 | Lead oxide sulfate | 12036-76-9 | 1000 | 2012.12.19 |
| 109 | Lead titanium trioxide | 12060-00-3 | 1000 | 2012.12.19 |



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|-----|--|-------------|-----------------------------------|-------------------|
| 110 | Acetic acid, lead salt, basic | 51404-69-4 | 1000 | 2012.12.19 |
| 111 | [Phthalato(2-)]dioxotrilead | 69011-06-9 | 1000 | 2012.12.19 |
| 112 | Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE) | 1163-19-5 | 1000 | 2012.12.19 |
| 113 | N-methylacetamide | 79-16-3 | 1000 | 2012.12.19 |
| 114 | Dinoseb (6-sec-butyl-2,4-dinitrophenol) | 88-85-7 | 1000 | 2012.12.19 |
| 115 | 1,2-Diethoxyethane | 629-14-1 | 1000 | 2012.12.19 |
| 116 | Tetralead trioxide sulphate | 12202-17-4 | 1000 | 2012.12.19 |
| 117 | N-pentyl-isopentylphthalate | 776297-69-9 | 1000 | 2012.12.19 |
| 118 | Dioxobis(stearato)trilead | 12578-12-0 | 1000 | 2012.12.19 |
| 119 | Tetraethyllead | 78-00-2 | 1000 | 2012.12.19 |
| 120 | Pentalead tetraoxide sulphate | 12065-90-6 | 1000 | 2012.12.19 |
| 121 | Pentacosafuorotridecanoic acid | 72629-94-8 | 1000 | 2012.12.19 |
| 122 | Tricosafuorododecanoic acid | 307-55-1 | 1000 | 2012.12.19 |
| 123 | Heptacosafuorotetradecanoic acid | 376-06-7 | 1000 | 2012.12.19 |
| 124 | 1-bromopropane (n-propyl bromide) | 106-94-5 | 1000 | 2012.12.19 |
| 125 | Methoxyacetic acid | 625-45-6 | 1000 | 2012.12.19 |
| 126 | 4-methyl-m-phenylenediamine (toluene-2,4-diamine) | 95-80-7 | 1000 | 2012.12.19 |
| 127 | Methyloxirane (Propylene oxide) | 75-56-9 | 1000 | 2012.12.19 |
| 128 | Trilead dioxide phosphonate | 12141-20-7 | 1000 | 2012.12.19 |
| 129 | o-aminoazotoluene | 97-56-3 | 1000 | 2012.12.19 |
| 130 | 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | 1000 | 2012.12.19 |
| 131 | 4,4'-oxydianiline and its salts | 101-80-4 | 1000 | 2012.12.19 |
| 132 | Orange lead (lead tetroxide) | 1314-41-6 | 1000 | 2012.12.19 |
| 133 | Biphenyl-4-ylamine | 92-67-1 | 1000 | 2012.12.19 |



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|-----|---|------------|-----------------------------------|-------------------|
| 134 | Diisopentylphthalate | 605-50-5 | 1000 | 2012.12.19 |
| 135 | Fatty acids, C16-18, lead salts | 91031-62-8 | 1000 | 2012.12.19 |
| 136 | Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) | 123-77-3 | 1000 | 2012.12.19 |
| 137 | Sulfurous acid, lead salt, dibasic | 62229-08-7 | 1000 | 2012.12.19 |
| 138 | Lead cyanamidate | 20837-86-9 | 1000 | 2012.12.19 |
| 139 | Cadmium | 7440-43-9 | 1000 | 2013.6.20 |
| 140 | Cadmium oxide | 1306-19-0 | 1000 | 2013.6.20 |
| 141 | Dipentyl phthalate (DPP) | 131-18-0 | 1000 | 2013.6.20 |
| 142 | 4-Nonylphenol, branched and linear, ethylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] | - | 1000 | 2013.6.20 |
| 143 | Ammonium pentadecafluorooctanoate (APFO) | 3825-26-1 | 1000 | 2013.6.20 |
| 144 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 1000 | 2013.6.20 |
| 145 | Cadmium sulphide | 1306-23-6 | 1000 | 2013.12.16 |
| 146 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 573-58-0 | 1000 | 2013.12.16 |
| 147 | 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 | 1000 | 2013.12.16 |
| 148 | Dihexyl phthalate | 84-75-3 | 1000 | 2013.12.16 |
| 149 | Imidazolidine-2-thione (2-imidazoline-2-thiol) | 96-45-7 | 1000 | 2013.12.16 |
| 150 | Lead di(acetate) | 301-04-2 | 1000 | 2013.12.16 |
| 151 | Trixylyl phosphate | 25155-23-1 | 1000 | 2013.12.16 |
| 152 | Cadmium chloride | 10108-64-2 | 1000 | 2014.06.16 |
| 153 | Sodium peroxometaborate | 7632-04-4 | 1000 | 2014.06.16 |
| 154 | Sodium perborate; perboric acid, sodium salt | - | 1000 | 2014.06.16 |



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|-----|--|-------------------------------------|-----------------------------------|-------------------|
| 155 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 68515-50-4 | 1000 | 2014.06.16 |
| 156 | Cadmium fluoride | 7790-79-6 | 1000 | 2014.12.17 |
| 157 | Cadmium sulphate | 10124-36-4; 31119-53-6 | 1000 | 2014.12.17 |
| 158 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | 1000 | 2014.12.17 |
| 159 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 25973-55-1 | 1000 | 2014.12.17 |
| 160 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) | 15571-58-1 | 1000 | 2014.12.17 |
| 161 | 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) | - | 1000 | 2014.12.17 |
| 162 | 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 | 1000 | 2015.6.15 |
| 163 | 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] | - | 1000 | 2015.6.15 |
| 164 | 1,3-propanesultone | 1120-71-4 | 1000 | 2015.12.17 |
| 165 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | 3864-99-1 | 1000 | 2015.12.17 |
| 166 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | 36437-37-3 | 1000 | 2015.12.17 |
| 167 | Nitrobenzene | 98-95-3 | 1000 | 2015.12.17 |
| 168 | Perfluorononan-1-ic-acid and its sodium and ammonium salts | 375-95-1 21049-39-8 4149-60-4 | 1000 | 2015.12.17 |
| 169 | Benzo[def]chrysene | 50-32-8 | 1000 | 2016.06.20 |



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|-----|--|--|-----------------------------------|-------------------|
| 170 | p-(1,1-dimethylpropyl)phenol | 80-46-6 | 1000 | 2017.01.12 |
| 171 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts <ul style="list-style-type: none"> o Ammonium nonadecafluorodecanoate o Decanoic acid, nonadecafluoro-, sodium salt | 335-76-2 3108-42-7 3830-45-3 | 1000 | 2017.01.12 |
| 172 | 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] | 6465-71-0 6465-74-3 6863-24-7 1987-50-4 72624-02-3 1824346-00-0 1139800-98-8 911371-07-8 911371-06-7 911370-98-4 861011-60-1 861010-65-3 857629-71-1 854904-93-1 854904-92-0 102570-52-5 100532-36-3 72861-06-4 71945-81-8 37872-24-5 33104-11-9 30784-32-8 30784-31-7 30784-27-1 | 1000 | 2017.01.12 |
| 173 | 4,4'-isopropylidenediphenol | 80-05-7 | 1000 | 2017.01.12 |
| 174 | Perfluorohexane-1-sulphonic acid and its salts (PFHxS) | - | 1000 | 2017.07.07 |



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|-----|---|--------------------------|-----------------------------------|-------------------|
| 175 | Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) | - | 1000 | 2018.01.15 |
| 176 | Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadec a-7,15-diene ("Dechlorane Plus" TM) | - | 1000 | 2018.01.15 |
| 177 | Chrysene | 218-01-9 1719-03-5 | 1000 | 2018.01.15 |
| 178 | Cadmium nitrate | 10022-68-1 10325-94-7 | 1000 | 2018.01.15 |
| 179 | Cadmium hydroxide | 21041-95-2 | 1000 | 2018.01.15 |
| 180 | Cadmium carbonate | 513-78-0 | 1000 | 2018.01.15 |
| 181 | Benz[a]anthracene | 56-55-3 1718-53-2 | 1000 | 2018.01.15 |
| 182 | Terphenyl, hydrogenated | 61788-32-7 | 1000 | 2018.06.27 |
| 183 | Octamethylcyclotetrasiloxane | 556-67-2 | 1000 | 2018.06.27 |
| 184 | Lead | 7439-92-1 | 1000 | 2018.06.27 |
| 185 | Ethylenediamine | 107-15-3 | 1000 | 2018.06.27 |
| 186 | Dodecamethylcyclohexasiloxane | 540-97-3 | 1000 | 2018.06.27 |
| 187 | Disodium octaborate | 12008-41-2 | 1000 | 2018.06.27 |
| 188 | Dicyclohexyl phthalate | 84-61-7 | 1000 | 2018.06.27 |
| 189 | Decamethylcyclopentasiloxane | 541-02-6 | 1000 | 2018.06.27 |
| 190 | Benzo[ghi]perylene | 191-24-2 | 1000 | 2018.06.27 |
| 191 | Benzene-1,2,4-tricarboxylic acid 1,2 anhydride | 552-30-7 | 1000 | 2018.06.27 |
| 192 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one | 15087-24-8 | 1000 | 2019.01.15 |
| 193 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 1000 | 2019.01.15 |
| 194 | Benzo[k]fluoranthene | 207-08-9 | 1000 | 2019.01.15 |
| 195 | Fluoranthene | 206-44-0; | 1000 | 2019.01.15 |



| # | Substance Name | CAS # | Concentration Threshold (PPM w/w) | Date of inclusion |
|-----|--|------------------------|-----------------------------------|-------------------|
| | | 93951-69-0 | | |
| 196 | Phenanthrene | 85-01-8 | 1000 | 2019.01.15 |
| 197 | Pyrene | 129-00-0; 1718-52-1 | 1000 | 2019.01.15 |
| 198 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4-NP) | - | 1000 | 2019.07.16 |
| 199 | 4-tert-butylphenol | 98-54-4 | 1000 | 2019.07.16 |
| 200 | 2-methoxyethyl acetate | 110-49-6 | 1000 | 2019.07.16 |
| 201 | 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides | - | 1000 | 2019.07.16 |
| 202 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 1000 | 2020.01.16 |
| 203 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 1000 | 2020.01.16 |
| 204 | Diisohexyl phthalate | 71850-09-4 | 1000 | 2020.01.16 |
| 205 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 1000 | 2020.01.16 |



REACH ANNEX 17 SUBSTANCES

| Entry no | Substance Name | EC Number | CAS Number |
|----------|--|-----------|-------------|
| 1 | Polychlorinated terphenyls (PCTs) | - | - |
| 2 | Chloroethylene (Vinyl chloride) | 200-831-0 | 75-01-4 |
| | 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 | | |
| 3 | Hazard class 5.1. | - | - |
| 4 | Tris (2,3 dibromopropyl) phosphate | - | 126-72-7 |
| 5 | Benzene | 200-753-7 | 71-43-2 |
| 6a | Asbestos fibres, (a) Crocidolite | - | 12001-28-4 |
| 6b | Asbestos fibres (b) Amosite | - | 12172-73-5 |
| 6c | Asbestos fibres (c) Anthophyllite | - | 77536-67-5 |
| 6d | Asbestos fibres (d) Actinolite | - | 77536-66-4 |
| 6e | Asbestos fibres (e) Tremolite | - | 77536-68-6 |
| 6f(1) | Asbestos fibres (f) Chrysotile | - | 12001-29-5 |
| 6f(2) | Asbestos fibres (f) Chrysotile | - | 132207-32-0 |
| 7 | Tris(aziridinyl)phosphin oxide | 208-892-5 | 545-55-1 |
| 8 | Polybromobiphenyls; Polybrominated biphenyls (PBB) | - | 59536-65-1 |
| 9a | (a) Soap bark powder (Quillaja saponaria) and its derivatives containing saponines | 273-620-4 | 68990-67-0 |
| 9b | (b) Powder of the roots of Helleborus viridis and Helleborus niger | - | - |
| 9c | (c) Powder of the roots of Veratrum album and Veratrum nigrum | - | - |
| 9d | (d) Benzidine and/or its derivatives | 202-199-1 | 92-87-5 |
| 9e | (e) o-Nitrobenzaldehyde | 209-025-3 | 552-89-6 |
| 9f | (f) Wood powder | - | - |
| 10a | (a) Ammonium sulphide | 235-223-4 | 12135-76-1 |
| 10b | (b) Ammonium hydrogen sulphide | 235-184-3 | 12124-99-1 |



| | | | |
|-----|---|--|--|
| 10c | (c) Ammonium polysulphide | 232-989-1 | 9080-17-5 |
| 11a | Volatile esters of bromoacetic acids: (a) Methyl bromoacetate | 202-499-2 | 96-32-2 |
| 11b | Volatile esters of bromoacetic acids: (b) Ethyl bromoacetate | 203-290-9 | 105-36-2 |
| 11c | Volatile esters of bromoacetic acids: (c) Propyl bromoacetate | - | 35223-80-4 |
| 11d | Volatile esters of bromoacetic acids: (d) Butyl bromoacetate | 242-729-9 | 18991-98-5 |
| 12 | 2-naphthylamine and its salts Salts of 2-naphthylamine 2-naphthylammonium chloride 2-naphthylammonium acetate 2-naphthylamine | 202-080-4 and its salts 210-313-6 209-030-0 202-080-4 | 91-59-8 612-52-2 553-00-4 91-59-8 |
| 13 | Benzidine Salts of benzidine | 202-199-1 and its salts | 92-87-5 |
| 14 | 4-Nitrobiphenyl | 202-204-7 | 92-93-3 |
| 15 | 4-Aminobiphenyl xenylamine | 202-177-1 and its salts | 92-67-1 |
| 16a | Lead carbonates: (a) Neutral anhydrous carbonate (PbCO ₃) | 209-943-4 | 598-63-0 |
| 16b | Lead carbonates: (b) Trilead-bis(carbonate)-dihydroxide 2PbCO ₃ -Pb(OH) ₂ | 215-290-6 | 1319-46-6 |
| 17a | Lead sulphates: (a) PbSO ₄ | 231-198-9 | 7446-14-2 |
| 17b | Lead sulphates: (b) Pb _x SO ₄ | 239-831-0 | 15739-80-7 |
| 18 | Mercury compounds | - | - |
| 18a | Mercury | 231-106-7 | 7439-97-6 |
| 19 | Arsenic compounds (as listed in Annex 17) | - | - |
| 20 | Organostannic compounds | - | - |
| 21 | Di-1¼-oxo-di-n-butylstanniohydroxyborane/ Dibutyltin hydrogen borate C ₈ H ₁₉ BO ₃ Sn (D126-72-7BB) | 401-040-5 | 75113-37-0 |
| 22 | Pentachlorophenol (as listed in Annex 17) | 201-778-6 and its salts and esters | 87-86-5 |
| 23 | Cadmium (as listed in Annex 17) | 231-152-8 and its compounds | 7440-43-9 |
| 24 | Monomethyl ' tetrachlorodiphenyl methane Trade name: Ugilec 141 | - | 76253-60-6 |
| 25 | Monomethyl-dichloro-diphenyl methane Trade name: Ugilec 121; Ugilec 21 | - | - |
| 26 | Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT | - | 99688-47-8 |
| 27 | Nickel | 231-111-4 and its compounds | 7440-02-0 |



| | | | |
|-----|---|-------------------------|-------------|
| 28 | 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: â€ Carcinogen category 1A (Table 3.1)/carcinogen category 1 (Table 3.2) listed in Appendix 1 â€ Carcinogen category 1B (Table 3.1)/carcinogen category 2 (Table 3.2) listed in Appendix 2 | - | - |
| 29 | 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 | - | - |
| 30 | 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 | - | - |
| 31a | (a) Creosote; wash oil | 232-287-5 | 8001-58-9 |
| 31b | (b) Creosote oil; wash oil | 263-047-8 | 61789-28-4 |
| 31c | (c) Distillates (coal tar), naphthalene oils; naphthalene oil | 283-484-8 | 84650-04-4 |
| 31d | (d) Creosote oil, acenaphthene fraction; wash oil | 283-484-8, 292-605-3 | 90640-84-9 |
| 31e | (e) Distillates (coal tar), upper; heavy anthracene oil | 266-026-1 | 65996-91-0 |
| 31f | (f) Anthracene oil | 292-602-7 | 90640-80-5 |
| 31g | (g) Tar acids, coal, crude; crude phenols | 266-019-3 | 65996-85-2 |
| 31h | (h) Creosote, wood | 232-419-1 | 8021-39-4 |
| 31i | (i) Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline | 310-191-5 | 122384-78-5 |
| 32 | Chloroform | 200-663-8 | 67-66-3 |
| 34 | 1,1,2-Trichloroethane | 201-166-9 | 79-00-5 |
| 35 | 1,1,2,2-Tetrachloroethane | 201-197-8 | 79-34-5 |
| 36 | 1,1,1,2-Tetrachloroethane | - | 630-20-6 |
| 37 | Pentachloroethane | 200-925-1 | 76-01-7 |
| 38 | 1,1-Dichloroethene | 200-864-0 | 75-35-4 |



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| 40 | 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 that Regulation or not. | - | - |
| 41 | Hexachloroethane | 200-666-4 | 67-72-1 |
| 43 | Azocolourants and Azodyes | - | - |
| 45 | Diphenylether, octabromo derivative C ₁₂ H ₂ Br ₈ O | - | - |
| 46a | (a) Nonylphenol C ₆ H ₄ (OH)C ₉ H ₁₉ | 246-672-0 | 25154-52-3 |
| 46b | (b) Nonylphenol ethoxylates (C ₂ H ₄ O) _n C ₁₅ H ₂₄ O | - | - |
| 47 | Chromium VI compounds | - | - |
| 48 | Toluene | 203-625-9 | 108-88-3 |
| 49 | Trichlorobenzene | 204-428-0 | 120-82-1 |
| 50a | Polycyclic-aromatic hydrocarbons (PAH) (a) Benzo[a]pyrene (BaP) | - | 50-32-8 |
| 50b | Polycyclic-aromatic hydrocarbons (PAH) (b) Benzo[e]pyrene (BeP) | - | 192-97-2 |
| 50c | Polycyclic-aromatic hydrocarbons (PAH) (c) Benzo[a]anthracene (BaA) | - | 56-55-3 |
| 50d | Polycyclic-aromatic hydrocarbons (PAH) (d) Chrysen (CHR) | - | 218-01-9 |
| 50e | Polycyclic-aromatic hydrocarbons (PAH) (e) Benzo[b]fluoranthene (BbFA) | - | 205-99-2 |
| 50f | Polycyclic-aromatic hydrocarbons (PAH) (f) Benzo[j]fluoranthene (BjFA) | - | 205-82-3 |
| 50g | Polycyclic-aromatic hydrocarbons (PAH) (g) Benzo[k]fluoranthene (BkFA) | - | 207-08-9 |
| 50h | Polycyclic-aromatic hydrocarbons (PAH) (h) Dibenzo[a,h]anthracene (DBAhA) | - | 53-70-3 |
| 51a | The following phthalates (or other CAS and EC numbers covering the substance): (a) Bis (2-ethylhexyl) phthalate (DEHP) | 204-211-0 | 117-81-7 |
| 51b | The following phthalates (or other CAS and EC numbers covering the substance): (b) Dibutyl phthalate (DBP) | 201-557-4 | 84-74-2 |
| 51c | The following phthalates (or other CAS and EC numbers covering the substance): (c) Benzyl butyl phthalate (BBP) | 201-622-7 | 85-68-7 |
| 52a | The following phthalates (or other CAS and EC numbers covering the substance) (a) Di-"isodecyl" phthalate (DIDP) | 247-977-1 and 271-091-4 | 26761-40-0 and 68515-49-1 |
| 52b | The following phthalates (or other CAS- and EC numbers covering the substance): | 249-079-5 and 271-090-9 | 28553-12-0 and 68515-48-0 |



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|-----|---|-----------|------------|
| | (b) Di-"isononyl" phthalate (DINP) | | |
| 52c | The following phthalates (or other CAS- and EC numbers covering the substance): (c) 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich | 271-091-4 | 68515-49-1 |
| 52d | The following phthalates (or other CAS- and EC numbers covering the substance): (d) 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich | 271-090-9 | 68515-48-0 |
| 52e | The following phthalates (or other CAS- and EC numbers covering the substance): (e) Di-n-octyl phthalate (DNOP) | 204-214-7 | 117-84-0 |
| 54 | 2-(2-methoxyethoxy)ethanol (DEGME) | 203-906-6 | 111-77-3 |
| 55 | 2-(2-butoxyethoxy)ethanol (DEGBE) | 203-961-6 | 112-34-5 |
| 56 | Methylenediphenyl diisocyanate (MDI) including the following specific isomers: | 247-714-0 | 26447-40-5 |
| 56a | a) 4,4'-Methylenediphenyl diisocyanate | 202-966-0 | 101-68-8 |
| 56b | b) 2,4'-Methylenediphenyl diisocyanate | 227-534-9 | 5873-54-1 |
| 56c | c) 2,2'-Methylenediphenyl diisocyanate | 219-799-4 | 2536-68-8 |
| 57 | Cyclohexane | 203-806-2 | 110-82-7 |
| 58 | Ammonium nitrate (AN) | 229-347-8 | 6484-52-2 |
| 59 | Dichloromethane | 200-838-9 | 75-09-2 |
| 60 | Acrylamide | - | 79-06-1 |
| 61 | Dimethylfumarate (DMF) | 210-849-0 | 624-49-7 |
| 62a | Phenylmercury octanoate | - | 13864-38-5 |
| 62b | Phenylmercury acetate | 200-532-5 | 62-38-4 |
| 62c | Phenylmercury neodecanoate | 247-783-7 | 26545-49-3 |
| 62d | Phenylmercury 2-ethylhexanoate | 236-326-7 | 13302-00-6 |
| 62e | Phenylmercury propionate | 203-094-3 | 103-27-5 |
| 63 | Lead and its compounds | 231-100-4 | 7439-92-1 |
| 64 | 1,4-Dichlorobenzene (p-dichlorobenzene) | 203-400-5 | 106-46-7 |
| 65 | Inorganic ammonium salts | - | - |
| 66 | 4,4'-isopropylidenediphenol Bisphenol A; BPA | 201-245-8 | 80-05-7 |
| 67 | Bis(pentabromophenyl) ether | 214-604-9 | 1163-19-5 |
| 68 | Pentadecafluorooctanoic acid | 206-397-9 | 335-67-1 |
| 69 | Methanol | 200-659-6 | 67-56-1 |
| 70 | Octamethylcyclotetrasiloxane (D4); Decamethylcyclopentasiloxane (D5) | - | - |
| 71 | 1-methyl-2-pyrrolidone | 212-828-1 | 872-50-4 |

