



Compliance with REACH

REACH (Registration, Evaluation, Authorization and Restriction of Chemical substances) is an European Community Regulation on chemicals and their safe use ([EC 1907/2006](#)). The regulation entered into force on June 1st 2007.

ON Semiconductor supports the basic aim of REACH in improving the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. ON Semiconductor meets all applicable REACH requirements and is committed to provide our customers with information about substances in its products as required.

Under REACH, registration provision is applicable to manufacture or import of chemicals and does not apply to ON Semiconductor's EU semiconductor manufacturing operations. It is anticipated that substances used in electronic products will be registered by raw material manufacturers within the supply chain.

ON Semiconductor's products are "articles" as defined in REACH Article 3(3) and do not release substances under their normal use. Suppliers of articles must provide recipients with information on Substances of Very High Concern (SVHC) if those are present above a concentration limit of 0.1 % on an article level.

ON Semiconductor products do not contain the Substances of Very High Concern, included in the Candidate List of substances of very high concern, issued by European Chemical Agency (ECHA), last updated on 15th of January 2019, with exception of Lead, which may be contained in some products (please see note **below Table1).

List of Substances of Very High Concern (SVHC)

Table 1

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|-----------|------------|-------------------|
| 4,4'- Diaminodiphenylmethane (MDA) | 202-974-4 | 101-77-9 | 10/28/2008 |
| 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) | 201-329-4 | 81-15-2 | 10/28/2008 |
| Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) | 287-476-5 | 85535-84-8 | 10/28/2008 |
| Anthracene | 204-371-1 | 120-12-7 | 10/28/2008 |
| Benzyl butyl phthalate (BBP) | 201-622-7 | 85-68-7 | 10/28/2008 |
| Bis (2-ethylhexyl)phthalate (DEHP) | 204-211-0 | 117-81-7 | 10/28/2008 |
| Bis(tributyltin)oxide (TBTO) | 200-268-0 | 56-35-9 | 10/28/2008 |
| Diarsenic pentaoxide | 215-116-9 | 1303-28-2 | 10/28/2008 |
| Diarsenic trioxide | 215-481-4 | 1327-53-3 | 10/28/2008 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|----------------------------|--|-------------------|
| Dibutyl phthalate (DBP) | 201-557-4 | 84-74-2 | 10/28/2008 |
| Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: | 247-148-4 and 221-695-9 | 25637-99-4 | 10/28/2008 |
| Alpha-hexabromocyclododecane | 247-148-4 and | 3194-55-6 | 10/28/2008 |
| Beta-hexabromocyclododecane | 221-695-9 | (134237-50-6) | 10/28/2008 |
| Gamma-hexabromocyclododecane | | (134237-51-7), (134237-52-8) | 10/28/2008 |
| Lead hydrogen arsenate | 232-064-2 | 7784-40-9 | 10/28/2008 |
| Sodium dichromate | 234-190-3 | 7789-12-0/ 10588-01-9 | 10/28/2008 |
| Triethyl arsenate | 427-700-2 | 15606-95-8 | 10/28/2008 |
| Cobalt dichloride | 231-589-4 | 7646-79-9 | 10/28/2008 |
| 2,4-Dinitrotoluene | 204-450-0 | 121-14-2 | 1/13/2010 |
| Anthracene oil | 292-602-7 | 90640-80-5 | 1/13/2010 |
| Anthracene oil, anthracene paste | 292-603-2 | 90640-81-6 | 1/13/2010 |
| Anthracene oil, anthracene paste, anthracene fraction | 295-275-9 | 91995-15-2 | 1/13/2010 |
| Anthracene oil, anthracene paste, distn. lights | 295-278-5 | 91995-17-4 | 1/13/2010 |
| Anthracene oil, anthracene-low | 292-604-8 | 90640-82-7 | 1/13/2010 |
| Diisobutyl phthalate | 201-553-2 | 84-69-5 | 1/13/2010 |
| Lead chromate | 231-846-0 | 7758-97-6 | 1/13/2010 |
| Lead chromate molybdate sulphate red (C.I. Pigment Red 104) | 235-759-9 | 12656-85-8 | 1/13/2010 |
| Lead sulfochromate yellow (C.I. Pigment Yellow 34) | 215-693-7 | 1344-37-2 | 1/13/2010 |
| Pitch, coal tar, high temp. | 266-028-2 | 65996-93-2 | 1/13/2010 |
| Tris(2-chloroethyl)phosphate | 204-118-5 | 115-96-8 | 1/13/2010 |
| Acrylamide | 201-173-7 | 79-06-1 | 3/30/2010 |
| Ammonium dichromate | 232-143-1 | 7789-09-5 | 6/18/2010 |
| Boric acid | 233-139-2 / 234-343-4 | 10043-35-3 / 11113-50-1 | 6/18/2010 |
| Disodium tetraborate, anhydrous | 215-540-4 | 1303-96-4/ 1330-43-4/ 12179-04-3 | 6/18/2010 |
| Potassium chromate | 232-140-5 | 7789-00-6 | 6/18/2010 |
| Potassium dichromate | 231-906-6 | 7778-50-9 | 6/18/2010 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|-------------------------|---|-------------------|
| Sodium chromate | 231-889-5 | 7775-11-3 | 6/18/2010 |
| Tetraboron Disodium Heptaoxide, hydrate | 235-541-3 | 12267-73-1 | 6/18/2010 |
| Trichloroethylene | 201-167-4 | 79-01-6 | 6/18/2010 |
| 2-Ethoxyethanol | 203-804-1 | 110-80-5 | 12/15/2010 |
| 2-Methoxyethanol | 203-713-7 | 109-86-4 | 12/15/2010 |
| Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid. | 231-801-5, 236-881-5 | 7738-94-5, 13530-68-2 | 12/15/2010 |
| Chromium trioxide | 215-607-8 | 1333-82-0 | 12/15/2010 |
| Cobalt(II) carbonate | 208-169-4 | 513-79-1 | 12/15/2010 |
| Cobalt(II) diacetate | 200-755-8 | 71-48-7 | 12/15/2010 |
| Cobalt(II) dinitrate | 233-402-1 | 10141-05-6 | 12/15/2010 |
| Cobalt(II) sulphate | 233-334-2 | 10124-43-3 | 12/15/2010 |
| 2-Ethoxyethyl acetate | 203-839-2 | 111-15-9 | 6/20/2011 |
| Strontium chromate | 232-142-6 | 7789-06-2 | 6/20/2011 |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters | 271-084-6 | 68515-42-4 | 6/20/2011 |
| Hydrazine | 206-114-9 | 302-01-2 / 7803-57-8 | 6/20/2011 |
| 1-Methyl-2-pyrrolidone | 212-828-1 | 872-50-4 | 6/20/2011 |
| 1,2,3-Trichloropropane | 202-486-1 | 96-18-4 | 6/20/2011 |
| 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | 276-158-1 | 71888-89-6 | 6/20/2011 |
| Zirconia Aluminosilicate Refractory Ceramic Fibres. <i>These fibres are: 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</i> | | Covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 | 12/19/2011 |
| Calcium arsenate | 231-904-5 | 7778-44-1 | 12/19/2011 |
| Bis(2-methoxyethyl) ether | 203-924-4 | 111-96-6 | 12/19/2011 |
| Aluminosilicate Refractory Ceramic Fibres. <i>These fibres are: 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</i> | | Covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 | 12/19/2011 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|-----------|------------|-------------------|
| Potassium hydroxyoctaoxodizincatedichromate | 234-329-8 | 11103-86-9 | 12/19/2011 |
| Lead dipicrate | 229-335-2 | 6477-64-1 | 12/19/2011 |
| N,N-dimethylacetamide | 204-826-4 | 127-19-5 | 12/19/2011 |
| Arsenic acid | 231-901-9 | 7778-39-4 | 12/19/2011 |
| 2-Methoxyaniline; o-Anisidine | 201-963-1 | 90-04-0 | 12/19/2011 |
| Trilead diarsenate | 222-979-5 | 3687-31-8 | 12/19/2011 |
| 1,2-dichloroethane | 203-458-1 | 107-06-2 | 12/19/2011 |
| Pentazinc chromate octahydroxide | 256-418-0 | 49663-84-5 | 12/19/2011 |
| 4-(1,1,3,3-tetramethylbutyl)phenol | 205-426-2 | 140-66-9 | 12/19/2011 |
| Formaldehyde, oligomeric reaction products with aniline | 500-036-1 | 25214-70-4 | 12/19/2011 |
| Bis(2-methoxyethyl) phthalate | 204-212-6 | 117-82-8 | 12/19/2011 |
| Lead diazide, Lead azide | 236-542-1 | 13424-46-9 | 12/19/2011 |
| Lead styphnate | 239-290-0 | 15245-44-0 | 12/19/2011 |
| 2,2'-dichloro-4,4'-methylenedianiline | 202-918-9 | 101-14-4 | 12/19/2011 |
| Phenolphthalein | 201-004-7 | 77-09-8 | 12/19/2011 |
| Dichromium tris(chromate) | 246-356-2 | 24613-89-6 | 12/19/2011 |
| α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) | 229-851-8 | 6786-83-0 | 06/18/2012 |
| N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base) | 202-959-2 | 101-61-1 | 06/18/2012 |
| 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β -TGIC) | 423-400-0 | 59653-74-6 | 06/18/2012 |
| Diboron trioxide | 215-125-8 | 1303-86-2 | 06/18/2012 |
| 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme) | 203-977-3 | 112-49-2 | 06/18/2012 |
| 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)] | 209-218-2 | 561-41-1 | 06/18/2012 |
| Lead(II) bis(methanesulfonate) | 401-750-5 | 17570-76-2 | 06/18/2012 |
| Formamide | 200-842-0 | 75-12-7 | 06/18/2012 |
| [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)] | 208-953-6 | 548-62-9 | 06/18/2012 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|--|---|---|-------------------|
| 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) | 203-794-9 | 110-71-4 | 06/18/2012 |
| [4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) <i>[with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]</i> | 219-943-6 | 2580-56-5 | 06/18/2012 |
| 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) | 219-514-3 | 2451-62-9 | 06/18/2012 |
| 4,4'-bis(dimethylamino)benzophenone (Michler's ketone) | 202-027-5 | 90-94-8 | 06/18/2012 |
| Pyrochlore, antimony lead yellow | 232-382-1 | 8012-00-8 | 12/19/2012 |
| 6-methoxy-m-toluidine (p-cresidine) | 204-419-1 | 120-71-8 | 12/19/2012 |
| Henicosafleuroundecanoic acid | 218-165-4 | 2058-94-8 | 12/19/2012 |
| 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] | 247-094-1, 243-072-0, 256-356-4, 260-566-1 | 25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9 | 12/19/2012 |
| 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] | 201-604-9, 236-086-3, 238-009-9 | 85-42-7, 13149-00-3, 14166-21-3 | 12/19/2012 |
| Dibutyltin dichloride (DBTC) | 211-670-0 | 683-18-1 | 12/19/2012 |
| Lead bis(tetrafluoroborate) | 237-486-0 | 13814-96-5 | 12/19/2012 |
| Lead dinitrate | 233-245-9 | 10099-74-8 | 12/19/2012 |
| Silicic acid, lead salt | 234-363-3 | 11120-22-2 | 12/19/2012 |
| 4-Aminoazobenzene | 200-453-6 | 60-09-3 | 12/19/2012 |
| Lead titanium zirconium oxide | 235-727-4 | 12626-81-2 | 12/19/2012 |
| Lead monoxide (lead oxide) | 215-267-0 | 1317-36-8 | 12/19/2012 |
| o-Toluidine | 202-429-0 | 95-53-4 | 12/19/2012 |
| 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 421-150-7 | 143860-04-2 | 12/19/2012 |
| Silicic acid (H ₂ Si ₂ 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] | 272-271-5 | 68784-75-8 | 12/19/2012 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|-----------|-------------|-------------------|
| Trilead bis(carbonate)dihydroxide | 215-290-6 | 1319-46-6 | 12/19/2012 |
| Furan | 203-727-3 | 110-00-9 | 12/19/2012 |
| N,N-dimethylformamide | 200-679-5 | 68-12-2 | 12/19/2012 |
| 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues] | - | - | 12/19/2012 |
| 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] | - | - | 12/19/2012 |
| 4,4'-methylenedi-o-toluidine | 212-658-8 | 838-88-0 | 12/19/2012 |
| Diethyl sulphate | 200-589-6 | 64-67-5 | 12/19/2012 |
| Dimethyl sulphate | 201-058-1 | 77-78-1 | 12/19/2012 |
| Lead oxide sulfate | 234-853-7 | 12036-76-9 | 12/19/2012 |
| Lead titanium trioxide | 235-038-9 | 12060-00-3 | 12/19/2012 |
| Acetic acid, lead salt, basic | 257-175-3 | 51404-69-4 | 12/19/2012 |
| [Phthalato(2-)]dioxotrilead | 273-688-5 | 69011-06-9 | 12/19/2012 |
| Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE) | 214-604-9 | 1163-19-5 | 12/19/2012 |
| N-methylacetamide | 201-182-6 | 79-16-3 | 12/19/2012 |
| Dinoseb (6-sec-butyl-2,4-dinitrophenol) | 201-861-7 | 88-85-7 | 12/19/2012 |
| 1,2-Diethoxyethane | 211-076-1 | 629-14-1 | 12/19/2012 |
| Tetralead trioxide sulphate | 235-380-9 | 12202-17-4 | 12/19/2012 |
| N-pentyl-isopentylphthalate | - | 776297-69-9 | 12/19/2012 |
| Dioxobis(stearato)trilead | 235-702-8 | 12578-12-0 | 12/19/2012 |
| Tetraethyllead | 201-075-4 | 78-00-2 | 12/19/2012 |
| Pentalead tetraoxide sulphate | 235-067-7 | 12065-90-6 | 12/19/2012 |
| Pentacosafuorotridecanoic acid | 276-745-2 | 72629-94-8 | 12/19/2012 |
| Tricosafuorododecanoic acid | 206-203-2 | 307-55-1 | 12/19/2012 |
| Heptacosafuorotetradecanoic acid | 206-803-4 | 376-06-7 | 12/19/2012 |
| 1-bromopropane (n-propyl bromide) | 203-445-0 | 106-94-5 | 12/19/2012 |
| Methoxyacetic acid | 210-894-6 | 625-45-6 | 12/19/2012 |
| 4-methyl-m-phenylenediamine (toluene-2,4-diamine) | 202-453-1 | 95-80-7 | 12/19/2012 |
| Methyloxirane (Propylene oxide) | 200-879-2 | 75-56-9 | 12/19/2012 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|---|-----------|------------|-------------------|
| Trilead dioxide phosphonate | 235-252-2 | 12141-20-7 | 12/19/2012 |
| o-aminoazotoluene | 202-591-2 | 97-56-3 | 12/19/2012 |
| 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 284-032-2 | 84777-06-0 | 12/19/2012 |
| 4,4'-oxydianiline and its salts | 202-977-0 | 101-80-4 | 12/19/2012 |
| Orange lead (lead tetroxide) | 215-235-6 | 1314-41-6 | 12/19/2012 |
| Biphenyl-4-ylamine | 202-177-1 | 92-67-1 | 12/19/2012 |
| Diisopentylphthalate | 210-088-4 | 605-50-5 | 12/19/2012 |
| Fatty acids, C16-18, lead salts | 292-966-7 | 91031-62-8 | 12/19/2012 |
| Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) | 204-650-8 | 123-77-3 | 12/19/2012 |
| Sulfurous acid, lead salt, dibasic | 263-467-1 | 62229-08-7 | 12/19/2012 |
| Lead cyanamidate | 244-073-9 | 20837-86-9 | 12/19/2012 |
| Cadmium | 231-152-8 | 7440-43-9 | 06/20/2013 |
| Ammonium pentadecafluorooctanoate (APFO) | 223-320-4 | 3825-26-1 | 06/20/2013 |
| Pentadecafluorooctanoic acid (PFOA) | 206-397-9 | 335-67-1 | 06/20/2013 |
| Dipentyl phthalate (DPP) | 205-017-9 | 131-18-0 | 06/20/2013 |
| 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] | | | 06/20/2013 |
| Cadmium oxide | 215-146-2 | 1306-19-0 | 06/20/2013 |
| Cadmium sulphide | 215-147-8 | 1306-23-6 | 12/16/2013 |
| 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) | 217-710-3 | 1937-37-7 | 12/16/2013 |
| Dihexyl phthalate | 201-559-5 | 84-75-3 | 12/16/2013 |
| Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 202-506-9 | 96-45-7 | 12/16/2013 |
| Trixylyl phosphate | 246-677-8 | 25155-23-1 | 12/16/2013 |
| Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 209-358-4 | 573-58-0 | 12/16/2013 |
| Lead di(acetate) | 206-104-4 | 301-04-2 | 12/16/2013 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|--|------------------------|-------------------------------------|--------------------------|
| 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 271-093-5 | 68515-50-4 | 06/16/2014 |
| Sodium perborate; perboric acid, sodium salt | 239-172-9; 234-390-0 | - | 06/16/2014 |
| Sodium peroxometaborate | 231-556-4 | 7632-04-4 | 06/16/2014 |
| Cadmium chloride | 233-296-7 | 10108-64-2 | 06/16/2014 |
| Cadmium Sulphate | 233-331-6 | 10124-36-4,31119-53-6 | 12/17/2014 |
| Cadmium fluoride | 232-222-0 | 7790-79-6 | 12/17/2014 |
| 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 247-384-8 | 25973-55-1 | 12/17/2014 |
| 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 | - | - | 12/17/2014 |
| 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) | 239-622-4 | 15571-58-1 | 12/17/2014 |
| 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 223-346-6 | 3846-71-7 | 12/17/2014 |
| Bis(2-ethylhexyl) phthalate (DEHP) | 204-211-0 | 117-81-7 | 12/17/2014 2008/10/28 |
| 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) | 271-094-0 272-013-1 | 68515-51-5 68648-93-1 | 06/15/2015 |
| 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 comb. thof] | - | - | 06/15/2015 |
| 1,3-propanesultone | 214-317-9 | 1120-71-4 | 12/17/2015 |
| 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | 223-383-8 | 3864-99-1 | 12/17/2015 |
| 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | 253-037-1 | 36437-37-3 | 12/17/2015 |
| Nitrobenzene | 202-716-0 | 98-95-3 | 12/17/2015 |
| Perfluorononan-1-oic-acid and its sodium and ammonium salts | 206-801-3 | 375-95-1 21049-39-8 4149-60-4 | 12/17/2015 |
| Benzo[def]chrysene | 200-028-5 | 50-32-8 | 06/20/2016 |
| p-(1,1-dimethylpropyl)phenol | 201-280-9 | 80-46-6 | 01/12/2017 |
| Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | | | 01/12/2017 |

| Substance name | EC No. | CAS No. | Date of Inclusion |
|--|-----------|---------------------------|-------------------|
| Nonadecafluorodecanoic acid | 206-400-3 | 335-76-2 | 01/12/2017 |
| Decanoic acid, nonadecafluoro-, sodium salt | - | 3830-45-3 | 01/12/2017 |
| Ammonium nonadecafluorodecanoate | 221-470-5 | 3108-42-7 | 01/12/2017 |
| 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 | - | - | 01/12/2017 |
| 4,4'-isopropylidenediphenol | 201-245-8 | 80-05-7 | 01/12/2017 |
| Perfluorohexane-1-sulphonic acid and its salts | - | - | 07/07/2017 |
| Benz[a]anthracene | 200-280-6 | 56-55-3, 1718-53-2 | 01/15/2018 |
| Cadmium carbonate | 208-168-9 | 513-78-0 | 01/15/2018 |
| Cadmium hydroxide | 244-168-5 | 21041-95-2 | 01/15/2018 |
| Cadmium nitrate | 233-710-6 | 10022-68-1, 10325-94-7 | 01/15/2018 |
| Chrysene | 205-923-4 | 218-01-9, 1719-03-5 | 01/15/2018 |
| 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 | - | - | 01/15/2018 |
| Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) | - | - | 01/15/2018 |
| Terphenyl, hydrogenated | 262-967-7 | 61788-32-7 | 06/27/2018 |
| Octamethylcyclotetrasiloxane | 209-136-7 | 556-67-2 | 06/27/2018 |
| Lead** | 231-100-4 | 7439-92-1 | 06/27/2018 |
| Ethylenediamine EDA | 203-468-6 | 107-15-3 | 06/27/2018 |
| Dodecamethylcyclohexasiloxane D6 | 208-762-8 | 540-97-6 | 06/27/2018 |
| Disodium octaborate | 234-541-0 | 12008-41-2 | 06/27/2018 |
| Dicyclohexyl phthalate DCHP | 201-545-9 | 84-61-7 | 06/27/2018 |
| Decamethylcyclopentasiloxane D5 | 208-764-9 | 541-02-6 | 06/27/2018 |
| Benzo[ghi]perylene | 205-883-8 | 191-24-2 | 06/27/2018 |
| Benzene-1,2,4-tricarboxylic acid 1,2 anhydride trimellitic anhydride; TMA | 209-008-0 | 552-30-7 | 06/27/2018 |
| Pyrene | 204-927-3 | 129-00-0; 1718-52-1 | 01/15/2019 |
| Phenanthrene | 201-581-5 | 85-01-8 | 01/15/2019 |

| | | | |
|---|-----------|-------------------------|------------|
| Fluoranthene | 205-912-4 | 206-44-0; 93951-69-0 | 01/15/2019 |
| Benzo[k]fluoranthene | 205-916-6 | 207-08-9 | 01/15/2019 |
| 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 401-720-1 | 6807-17-6 | 01/15/2019 |
| 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one <small>3-benzylidene camphor; 3-BC</small> | 239-139-9 | 15087-24-8 | 01/15/2019 |

Note :

*Diboron trioxide was added to REACH as a Substance of Very High Concern (SVHC) on June 18, 2012. ON SEMICONDUCTOR products in glass encapsulated packages may list Diboron trioxide as a constituent material in the glass encapsulation, in a concentration greater than 0.1%; REACH classifies; glass as a substance of unknown or variable composition, complex reaction products or biological matter (UVCB) containing the elements silica, calcium, sodium, potassium, magnesium and other cautions bonded together with oxygen. In glass, these elements are bonded into a non-crystalline molecular structure with completely different properties than the starting material; Therefore Diboron trioxide is not present in the finished ON SEMICONDUCTOR product and does not require notification of the presence of a SVHC

**Lead, which was added to the REACH as a Substance of Very High Concern(SVHC) on June 27th, 2018, may be contained in some of ON SEMICONDUCTOR products. If present, Lead is declared in a material declaration.

ON Semiconductor products do not contain any of the Substances included in the Authorisation List, issued by European Chemical Agency (ECHA), last updated on 10th Jan., 2018.

REACH Annex XIV: REACH Authorisation list

Table 2.

Note: Group entries are split in different rows.

| Substance name | EC No. | CAS No. | Entry No. | Sunset Date | Latest application date |
|--|-----------|-------------|-----------|-------------|-------------------------|
| 5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene) | 201-329-4 | 81-15-2 | 01 | 21/08/2014 | 21/02/2013 |
| 4,4'- Diaminodiphenylmethane (MDA) | 202-974-4 | 101-77-9 | 02 | 21/08/2014 | 21/02/2013 |
| Hexabromocyclododecane (HBCDD) | - | - | 03 | 21/08/2015 | 21/02/2014 |
| gamma-hexabromocyclododecane | - | 134237-52-8 | 03 | 21/08/2015 | 21/02/2014 |
| beta-hexabromocyclododecane | - | 134237-51-7 | 03 | 21/08/2015 | 21/02/2014 |
| Hexabromocyclododecane | 247-148-4 | 25637-99-4 | 03 | 21/08/2015 | 21/02/2014 |
| 1,2,5,6,9,10-hexabromocyclododecane | 221-695-9 | 3194-55-6 | 03 | 21/08/2015 | 21/02/2014 |
| alpha-hexabromocyclododecane | - | 134237-50-6 | 03 | 21/08/2015 | 21/02/2014 |

| | | | | | |
|--|-----------|--------------------------|----|------------|------------|
| Bis(2-ethylhexyl) phthalate (DEHP) | 204-211-0 | 117-81-7 | 04 | 21/02/2015 | 21/08/2013 |
| Benzyl butyl phthalate (BBP) | 201-622-7 | 85-68-7 | 05 | 21/02/2015 | 21/08/2013 |
| Dibutyl phthalate (DBP) | 201-557-4 | 84-74-2 | 06 | 21/02/2015 | 21/08/2013 |
| Diisobutyl phthalate (DIBP) | 201-553-2 | 84-69-5 | 07 | 21/02/2015 | 21/08/2013 |
| Diarsenic trioxide | 215-481-4 | 1327-53-3 | 08 | 21/05/2015 | 21/11/2013 |
| Diarsenic pentaoxide | 215-116-9 | 1303-28-2 | 09 | 21/05/2015 | 21/11/2013 |
| Lead chromate | 231-846-0 | 7758-97-6 | 10 | 21/05/2015 | 21/11/2013 |
| Lead sulfochromate yellow | 215-693-7 | 1344-37-2 | 11 | 21/05/2015 | 21/11/2013 |
| Lead chromate molybdate sulfate red | 235-759-9 | 12656-85-8 | 12 | 21/05/2015 | 21/11/2013 |
| Tris(2-chloroethyl) phosphate | 204-118-5 | 115-96-8 | 13 | 21/08/2015 | 21/02/2014 |
| 2,4-dinitrotoluene (2,4-DNT) | 204-450-0 | 121-14-2 | 14 | 21/08/2015 | 21/02/2014 |
| Trichloroethylene | 201-167-4 | 79-01-6 | 15 | 21/04/2016 | 21/10/2014 |
| Chromium trioxide | 215-607-8 | 1333-82-0 | 16 | 21/09/2017 | 21/03/2016 |
| Acids generated from chromium trioxide and their oligomers | - | - | 17 | 21/09/2017 | 21/03/2016 |
| Oligomers of chromic acid and dichromic acid | - | - | 17 | 21/09/2017 | 21/03/2016 |
| Chromic acid | 231-801-5 | 7738-94-5 | 17 | 21/09/2017 | 21/03/2016 |
| Dichromic acid | 236-881-5 | 13530-68-2 | 17 | 21/09/2017 | 21/03/2016 |
| Sodium dichromate | 234-190-3 | 10588-01-9, 7789-12-0 | 18 | 21/09/2017 | 21/03/2016 |

| | | | | | |
|---|-----------|------------|----|------------|------------|
| Potassium dichromate | 231-906-6 | 7778-50-9 | 19 | 21/09/2017 | 21/03/2016 |
| Ammonium dichromate | 232-143-1 | 7789-09-5 | 20 | 21/09/2017 | 21/03/2016 |
| Potassium chromate | 232-140-5 | 7789-00-6 | 21 | 21/09/2017 | 21/03/2016 |
| Sodium chromate | 231-889-5 | 7775-11-3 | 22 | 21/09/2017 | 21/03/2016 |
| Formaldehyde, oligomeric reaction products with aniline | 500-036-1 | 25214-70-4 | 23 | 22/08/2017 | 22/02/2016 |
| Arsenic acid | 231-901-9 | 7778-39-4 | 24 | 22/08/2017 | 22/02/2016 |
| Bis(2-methoxyethyl) ether | 203-924-4 | 111-96-6 | 25 | 22/08/2017 | 22/02/2016 |
| 1,2-dichloroethane (EDC) | 203-458-1 | 107-06-2 | 26 | 22/11/2017 | 22/05/2016 |
| 2,2'-dichloro-4,4'-methylenedianiline (MOCA) | 202-918-9 | 101-14-4 | 27 | 22/11/2017 | 22/05/2016 |
| Dichromium tris(chromate) | 246-356-2 | 24613-89-6 | 28 | 22/01/2019 | 22/07/2017 |
| Strontium chromate | 232-142-6 | 7789-06-2 | 29 | 22/01/2019 | 22/07/2017 |
| Potassium hydroxyoctaoxodizincatedichromate | 234-329-8 | 11103-86-9 | 30 | 22/01/2019 | 22/07/2017 |
| Pentazinc chromate octahydroxide | 256-418-0 | 49663-84-5 | 31 | 22/01/2019 | 22/07/2017 |
| 1-bromopropane (n-propyl bromide) | 203-445-0 | 106-94-5 | 32 | 04/07/2020 | 04/01/2019 |
| Diisopentyl phthalate | 210-088-4 | 605-50-5 | 33 | 04/07/2020 | 04/01/2019 |
| 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich | 276-158-1 | 71888-89-6 | 34 | 04/07/2020 | 04/01/2019 |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters | 271-084-6 | 68515-42-4 | 35 | 04/07/2020 | 04/01/2019 |
| 1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear | 284-032-2 | 84777-06-0 | 36 | 04/07/2020 | 04/01/2019 |

| | | | | | |
|---|-----------|-------------|----|------------|------------|
| Bis(2-methoxyethyl) phthalate | 204-212-6 | 117-82-8 | 37 | 04/07/2020 | 04/01/2019 |
| Dipentyl phthalate | 205-017-9 | 131-18-0 | 38 | 04/07/2020 | 04/01/2019 |
| N-pentyl-isopentylphthalate | - | 776297-69-9 | 39 | 04/07/2020 | 04/01/2019 |
| Anthracene oil | 292-602-7 | 90640-80-5 | 40 | 04/10/2020 | 04/04/2019 |
| Pitch, coal tar, high-temp. | 266-028-2 | 65996-93-2 | 41 | 04/10/2020 | 04/04/2019 |
| 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated | - | - | 42 | 04/01/2021 | 04/07/2019 |
| 4-Nonylphenol, branched and linear, ethoxylated | - | - | 43 | 04/01/2021 | 04/07/2019 |

ON SEMICONDUCTOR products do not contain any of the restricted substances, as defined in Article 67 and Annex XIV (including all amendments).

Date : 01/18/2019
Name : Jozef Vavro
Title : Product Environmental Compliance Manager

Signature : 

Published: 01/18/2019, Rev.26