



Accuris has added the following environmental document to the active parts as mentioned in the document from Diodes Inc as of 15-January-2018.

Thank You.

## Diodes Incorporated RoHS & REACH Compliance

Re: End of Vehicle Life Directive (EVL) 2000/53/EC and Annex II (EVL II) 2000/53/EC  
 Restrictions of Hazardous Substances Directive (RoHS) 2002/95/EC (repealed as from 3 January 2013 but listed here for completeness), 2011/65/EU (RoHS 2) and 2015/863/EU (RoHS 3).  
 Waste Electrical and Electronic Equipment (WEEE)  
 REACH (EC) No 1907/2006 (REACH 181) 15 January 2018  
 REACH (EC) No 1907/2006 Annex XIV 7 July 2017  
 REACH (EC) No 1907/2006 Annex XVII 12 September 2017  
 GADSL: (Global Automotive Declarable Substance List) 1 February 2017  
 Japanese Legislation (Various)  
 JEDEC JS709B - Definition of "Low-Halogen" for Electronic Products (applies to "green" or "halogen-free" products only)  
 China RoHS  
 California Proposition 65 – 29 December 2017  
 IEC 62474 (Replaces JIG 101) – D14 - 3 September 2017  
 Montreal Protocol  
 Stockholm Convention (POP Regulation) (EC Regulation 850/2004)  
 Canadian Regulation SOR/2014-254 Products containing Mercury Regulation  
 The Biocidal Product Regulation (BPR, Regulation (EU) 528/2012)

Diodes Incorporated and its subsidiaries, Diodes Zetex Semiconductors Limited, Diodes FabTech, PAM & BCD has reviewed its manufacturing process and materials along with those of our contractors and suppliers against the above.

We hereby declare that all of our products comply fully with the above and do not contain any of the following substances except as CURRENTLY exempted by ELV II and RoHS II or as impurities:

Restricted Substances	RoHS maximum permitted level	
Cadmium and cadmium compounds	100ppm (0.01%)	Not present
Hexavalent chromium compounds (Chromium VI compounds)	1,000ppm (0.1%)	Not present
Lead and lead compounds	1,000ppm (0.1%)	Refer to product list
Mercury and mercury compounds	1,000ppm (0.1%)	Not present
Polybrominated biphenyls (PBB)	1,000ppm (0.1%)	Not present
Polybrominated diphenyl ethers (PBDE)	1,000ppm (0.1%)	Not present
Bis(2-ethylhexyl) phthalate (DEHP)	1,000ppm (0.1%)	Not present
Benzyl butyl phthalate (BBP)	1,000ppm (0.1%)	Not present
Dibutyl phthalate (DBP)	1,000ppm (0.1%)	Not present
Diisobutyl phthalate (DIBP)	1,000ppm (0.1%)	Not present

Asbestos  
 Azo compounds (Azocolourants and Azodyes)  
 Certain Shortchain Chlorinated Paraffins  
 Chlorinated organic compounds  
 Dimethyl fumarate  
 Formaldehyde  
 Organic tin compounds  
 Ozone Depleting Substances - Class I (CFCs, HBFCs, etc.)  
 Ozone Depleting Substances - Class II (HCFCs)  
 Perfluorooctane Sulphonate (PFOS)  
 Polychlorinated Biphenyls (PCBs)  
 Polychlorinated Naphthalenes (>3 chlorine atoms)  
 Polychlorinated Terphenyls (PCTs)  
 Polycyclic aromatic hydrocarbons (PAHs)  
 Radioactive Substances  
 Red Phosphorous  
 Tributyl Tin (TBT) and Triphenyl Tin (TPT), Dibutyltin (DBT) compounds, Dioctyltin (DOT) compounds  
 Tributyl Tin Oxide (TBTO)

**Our products have never contained PFOS or DecaBDE compounds and no exemptions for these have ever been taken.**

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**REACH Substances of Very High Concern (SVHCs) No SVHCs are present in all product versions or articles incorporated into products in concentrations of more than 0.1% weight/weight.<sup>1,2</sup>**

Substance Name	EC Number	CAS Number	Date
4,4'- Diaminodiphenylmethane (MDA)	202-974-4	101-77-9	2008-10
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2	2008-10
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	2008-10
Anthracene	204-371-1	120-12-7	2008-10
Benzyl butyl phthalate (BBP)	201-622-7	85-68-7	2008-10
Bis(2-ethylhexyl) phthalate (DEHP)	204-211-0	117-81-7	2008-10 2014-12
Bis(tributyltin)oxide (TBTO)	200-268-0	56-35-9	2008-10
Cobalt dichloride	231-589-4	7646-79-9	2008-10 2011-06
Diarsenic pentaoxide	215-116-9	1303-28-2	2008-10
Diarsenic trioxide	215-481-4	1327-53-3	2008-10
Dibutyl phthalate (DBP)	201-557-4	84-74-2	2008-10
Sodium dichromate	234-190-3	7789-12-0, 10588-01-9	2008-10
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4, 221-695-9	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	2008-10
Lead hydrogen arsenate	232-064-2	7784-40-9	2008-10
Triethyl arsenate	427-700-2	15606-95-8	2008-10
2,4-Dinitrotoluene	204-450-0	121-14-2	2010-01
Anthracene oil	292-602-7	90640-80-5	2010-01
Anthracene oil, anthracene paste	292-603-2	90640-81-6	2010-01
Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	2010-01
Anthracene oil, anthracene paste, distn- lights	295-278-5	91995-17-4	2010-01
Anthracene oil, anthracene-low	292-604-8	90640-82-7	2010-01
Diisobutyl phthalate	201-553-2	84-69-5	2010-01
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	-	-	2011-12
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 (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight			2011-12
Acrylamide	201-173-7	79-06-1	2010-01
Lead chromate	231-846-0	7758-97-6	2010-01
Lead chromate molybdate sulphate red (C-I- Pigment Red 104)	235-759-9	12656-85-8	2010-01
Lead sulfochromate yellow (C-I- Pigment Yellow 34)	215-693-7	1344-37-2	2010-01
Pitch, coal tar, high temp-	266-028-2	65996-93-2	2010-01
Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	2010-01
Ammonium dichromate	232-143-1	7789-09-05	2010-06
Boric acid	233-139-2, 234-343-4	10043-35-3, 11113-50-1	2010-06
Disodium tetraborate, anhydrous	215-540-4	1303-96-4, 1330-43-4, 12179-04-3	2010-06
Potassium chromate	232-140-5	7789-00-6	2010-06
Potassium dichromate	231-906-6	7778-50-9	2010-06
Sodium chromate	231-889-5	7775-11-3	2010-06
Tetraboron disodium heptaoxide, hydrate	235-541-3	12267-73-1	2010-06

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Substance Name	EC Number	CAS Number	Date
Trichloroethylene	201-167-4	79-01-6	2010-06
2-Ethoxyethanol	203-804-1	110-80-5	2010-12
2-Methoxyethanol	203-713-7	109-86-4	2010-12
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	2010-12
Chromium trioxide	215-607-8	1333-82-0	2010-12
Cobalt(II) carbonate	208-169-4	513-79-1	2010-12
Cobalt(II) diacetate	200-755-8	71-48-7	2010-12
Cobalt(II) dinitrate	233-402-1	10141-05-6	2010-12
Cobalt(II) sulphate	233-334-2	10124-43-3	2010-12
1,2,3-Trichloropropane	202-486-1	96-18-4	2011-06
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	276-158-1	71888-89-6	2011-06
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	271-084-6	68515-42-4	2011-06
1-Methyl-2-pyrrolidone	212-828-1	872-50-4	2011-06
2-Ethoxyethyl acetate	203-839-2	111-15-9	2011-06
Hydrazine	206-114-9	302-01-2, 7803-57-8	2011-06
Strontium chromate	232-142-6	7789-06-2	2011-06
1,2-dichloroethane	203-458-1	107-06-2	2011-12
2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	2011-12
2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	2011-12
4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	2011-12
Arsenic acid	231-901-9	7778-39-4	2011-12
Bis(2-methoxyethyl) ether	203-924-4	111-96-6	2011-12
Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	2011-12
Calcium arsenate	231-904-5	7778-44-1	2011-12
Dichromium tris(chromate)	246-356-2	24613-89-6	2011-12
Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	2011-12
Lead diazide, Lead azide	236-542-1	13424-46-9	2011-12
Lead dipicrate	229-335-2	6477-64-1	2011-12
Lead styphnate	239-290-0	15245-44-0	2011-12
N,N-dimethylacetamide	204-826-4	127-19-5	2011-12
Pentazinc chromate octahydroxide	256-418-0	49663-84-5	2011-12
Phenolphthalein	201-004-7	77-09-8	2011-12
Potassium hydroxyoctaoxodizincatedichromate	234-329-8	11103-86-9	2011-12
Trilead diarsenate	222-979-5	3687-31-8	2011-12
[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)]	219-943-6	2580-56-5	2012-06
[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)]	208-953-6	548-62-9	2012-06
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2	2012-06
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	2012-06
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	219-514-3	2451-62-9	2012-06
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	2012-06
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)]	209-218-2	561-41-1	2012-06
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	202-027-5	90-94-8	2012-06
Diboron trioxide	215-125-8	1303-86-2	2012-06
Formamide	200-842-0	75-12-7	2012-06
Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2	2012-06
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	2012-06
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)]	229-851-8	6786-83-0	2012-06
[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9	2012-12
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	2012-12
1,2-Diethoxyethane	211-076-1	629-14-1	2012-12

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Substance Name	EC Number	CAS Number	Date
1-bromopropane (n-propyl bromide)	203-445-0	106-94-5	2012-12
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	2012-12
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	2012-12
4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	2012-12
4,4'-oxydianiline and its salts	202-977-0	101-80-4	2012-12
4-Aminoazobenzene	200-453-6	60-09-3	2012-12
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7	2012-12
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]	-	-	2012-12
6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	2012-12
Acetic acid, lead salt, basic	257-175-3	51404-69-4	2012-12
Biphenyl-4-ylamine	202-177-1	92-67-1	2012-12
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5	2012-12
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	2012-12
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3	2012-12
Dibutyltin dichloride (DBTC)	211-670-0	683-18-1	2012-12
Diethyl sulphate	200-589-6	64-67-5	2012-12
Diisopentylphthalate	210-088-4	605-50-5	2012-12
Dimethyl sulphate	201-058-1	77-78-1	2012-12
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	201-861-7	88-85-7	2012-12
Dioxobis(stearato)trilead	235-702-8	12578-12-0	2012-12
Fatty acids, C16-18, lead salts	292-966-7	91031-62-8	2012-12
Furan	203-727-3	110-00-9	2012-12
Henicosafuoroundecanoic acid	218-165-4	2058-94-8	2012-12
Heptacosafuorotetradecanoic acid	206-803-4	376-06-7	2012-12
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	2012-12
Lead bis(tetrafluoroborate)	237-486-0	13814-96-5	2012-12
Lead cyanamidate	244-073-9	20837-86-9	2012-12
Lead dinitrate	233-245-9	10099-74-8	2012-12
Lead monoxide (lead oxide)	215-267-0	1317-36-8	2012-12
Lead oxide sulfate	234-853-7	12036-76-9	2012-12
Lead titanium trioxide	235-038-9	12060-00-3	2012-12
Lead titanium zirconium oxide	235-727-4	12626-81-2	2012-12
Methoxyacetic acid	210-894-6	625-45-6	2012-12
Methyloxirane (Propylene oxide)	200-879-2	75-56-9	2012-12
N,N-dimethylformamide	200-679-5	68-12-2	2012-12
N-methylacetamide	201-182-6	79-16-3	2012-12
N-pentyl-isopentylphthalate	-	776297-69-9	2012-12
o-aminoazotoluene	202-591-2	97-56-3	2012-12
Orange lead (lead tetroxide)	215-235-6	1314-41-6	2012-12
o-Toluidine	202-429-0	95-53-4	2012-12
Pentacosafuorotridecanoic acid	276-745-2	72629-94-8	2012-12
Pentalead tetraoxide sulphate	235-067-7	12065-90-6	2012-12
Pyrochlore, antimony lead yellow	232-382-1	8012-00-8	2012-12
Silicic acid (H <sub>2</sub> SiO <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]	272-271-5	68784-75-8	2012-12
Silicic acid, lead salt	234-363-3	11120-22-2	2012-12
Sulfurous acid, lead salt, dibasic	263-467-1	62229-08-7	2012-12
Tetraethyllead	201-075-4	78-00-2	2012-12
Tetralead trioxide sulphate	235-380-9	12202-17-4	2012-12
Tricosafuorododecanoic acid	206-203-2	307-55-1	2012-12
Trilead bis(carbonate)dihydroxide	215-290-6	1319-46-6	2012-12
Trilead dioxide phosphonate	235-252-2	12141-20-7	2012-12

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Substance Name	EC Number	CAS Number	Date
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]	-	-	2013-06
Ammonium pentadecafluorooctanoate (APFO)	223-320-4	3825-26-1	2013-06
Cadmium	231-152-8	7440-43-9	2013-06
Cadmium oxide	215-146-2	1306-19-0	2013-06
Dipentyl phthalate (DPP)	205-017-9	131-18-0	2013-06
Pentadecafluorooctanoic acid (PFOA)	206-397-9	335-67-1	2013-06
Cadmium sulphide	215-147-8	1306-23-6	2013-12
Dihexyl phthalate	201-559-5	84-75-3	2013-12
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	2013-12
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	2013-12
Imidazolidine-2-thione; (2-imidazoline-2-thiol)	202-506-9	96-45-7	2013-12
Lead di(acetate)	206-104-4	301-04-2	2013-12
Triethyl phosphate	246-677-8	25155-23-1	2013-12
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4	2014-06
Cadmium chloride	233-296-7	10108-64-2	2014-06
Sodium perborate; perboric acid, sodium salt	239-172-9, 234-390-0	-	2014-06
Sodium peroxometaborate	231-556-4	7632-4-4	2014-06
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	2014-12
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	2014-12
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	2014-12
Cadmium fluoride	232-222-0	7790-79-6	2014-12
Cadmium sulphate	233-331-6	10124-36-4, 31119-53-6	2014-12
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)	-	-	2014-12
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	2015-6
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 isomers of [1] and [2] or any combination thereof]			2015-6
Nitrobenzene	202-716-0	98-95-3	2015-12
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	223-383-8	3864-99-1	2015-12
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	2015-12
1,3-propanesultone	214-317-9	1120-71-4	2015-12
Perfluorononan-1-oic-acid and its sodium and ammonium salts	206-801-3	375-95-1 21049-39-8 4149-60-4	2015-12
Benzo[def]chrysene	200-028-5	50-32-8	2016-06
4,4'-isopropylidenediphenol (bisphenol A; BPA)	201-245-8	80-05-7	2017-01
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	-	-	2017-01
Nonadecafluorodecanoic acid	206-400-3	335-76-2	
Ammonium nonadecafluorodecanoate	221-470-5	3108-42-7	
Decanoic acid, nonadecafluoro-, sodium salt	-	3830-45-3	
p-(1,1-dimethylpropyl)phenol	201-280-9	80-46-6	2017-01
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]	-	-	2017-01
Perfluorohexane-1-sulphonic acid and its salts	-	-	2017-07
Benzo[a]anthracene	200-280-6	56-55-3, 1718-53-2	2018-01

<b>REACH Substances of Very High Concern (SVHCs) No SVHCs are present in all product versions or articles incorporated into products in concentrations of more than 0.1% weight/weight.<sup>1 2</sup></b>			
<b>Substance Name</b>	<b>EC Number</b>	<b>CAS Number</b>	<b>Date</b>
Cadmium carbonate	208-168-9	513-78-0	2018-01
Cadmium hydroxide	244-168-5	21041-95-2	2018-01
Cadmium nitrate	233-710-6	10022-68-1, 10325-94-7	2018-01
Chrysene	205-923-4	218-01-9, 1719-03-5	2018-01
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]	-	-	2018-01
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]	-	-	2018-01

<sup>1</sup> Trace quantities of SVHCs may be present but are below the reporting threshold-

<sup>2</sup> Lead Monoxide

EU Decision number ED/169/2012 dated 19 December 2012 added Lead Monoxide (EC number 215-267-0, CAS number 1317-36-8) to REACH Annex XIV as a substance of very high concern (SVHC)- Certain Diodes Incorporated products were stated as containing glass with lead (Lead Monoxide) as a substance exceeding 0-1% by weight is present within the die glass passivation and/or glass encapsulation-

Under the REACH regulation, glass is classified as a UVCB substance (a substance of unknown or variable composition, complex reaction products or biological material) containing such elements as silicon, calcium, sodium, potassium, magnesium bonded together by oxygen; these elements are bonded into a non-crystalline molecular structure with completely different properties to the starting raw materials- Glass is not a mixture of compounds such as SiO<sub>2</sub>, Na<sub>2</sub>O, CaO, B<sub>2</sub>O<sub>3</sub>, PbO, etc- and since glass itself is not considered hazardous and is not included in the SVHC list, there are no obligations to communicate information according to Article 33 of the REACH regulation concerning SVHC in articles and related to lead monoxide in glass-

**REACH ANNEX XVII All products versions and articles incorporated into products do not contain/use these substances in restricted applications-**

<b>Entry No-</b>	<b>Substance name</b>	<b>CAS number</b>	<b>EC Number</b>
1	Polychlorinated terphenyls (PCT)	-	-
2	Chloro-1-ethylene (monomer vinyl chloride)	75-01-4	200-831-0
4	Tris (2,3 dibromopropyl) phosphate	126-72-7	204-799-9
5	Benzene	71-43-2	200-753-7
6	Crocidolite	12001-28-4	-
	Amosite	12172-73-5	-
	Anthophyllite	77536-67-5	-
	Actinolite	77536-66-4	-
	Tremolite	77536-68-6	-
	Chrysotile	12001-29-5 132207-32-0	-
7	Tris(aziridiny)phosphin oxide	5455-55-1	-
8	Polybromobiphenyls; Polybrominatedbiphenyls (PBB)	-	-
	Polybromobiphenyls; Polybrominatedbiphenyls (PBB)	59536-65-1	-
9	Benzidine and/or its derivatives	92-87-5	202-199-1
	o-Nitrobenzaldehyde	552-89-6	209-025-3
	Soap bark powder (Quillaja saponaria) and its derivatives containing saponines	-	-
	Wood powder	-	-
	Powder of the roots of Helleborus viridis and Helleborus niger	-	-
	Powder of the roots of Veratrum album and Veratrum nigrum	-	-
10	Ammonium hydrogen sulphide	12124-99-1	235-184-3
	Ammonium polysulphide	9080-17-5	232-989-1
	Ammonium sulphide	12135-76-1	235-223-4
11	Butyl bromoacetate	18991-98-5	242-729-9
	Ethyl bromoacetate	105-36-2	203-290-9
	Methyl bromoacetate	96-32-2	202-499-2
	Propyl bromoacetate	35223-80-4	-
12	2-Naphthylamine and its salts	91-59-8	202-080-4
	2-naphthylammonium chloride	612-52-2	210-313-6

**REACH ANNEX XVII All products versions and articles incorporated into products do not contain/use these substances in restricted applications-**

<u>Entry No-</u>	<u>Substance name</u>	<u>CAS number</u>	<u>EC Number</u>
	2-naphthylammonium acetate	553-00-4	209-030-0
13	Benzidine and/or its derivatives	92-87-5	202-199-1
14	4-Nitrobiphenyl	92-93-3	202-204-7
15	4-Aminobiphenyl xenylamine and its salt	92-67-1	202-177-1
16a	Lead Carbonates: Neutral anhydrous carbonate (PbCO <sub>3</sub> )	598-63-0	209-943-4
16b	Lead Carbonates: Trilead-bis(carbonate)-dihydroxide 2PbCO <sub>3</sub> -Pb(OH) <sub>2</sub>	1319-46-6	215-290-6
17a	Lead Sulphates: PbSO <sub>4</sub>	7446-14-2	231-198-9
17b	Lead Sulphates: Pb <sub>x</sub> SO <sub>4</sub>	15739-80-7	239-831-0
18	Mercury and its compounds	Various	Various
19	Arsenic compounds	Various	Various
20	Organo stannic compounds	Various	Various
21	Di-μ-oxo-di-n-butylstannio hydroxyborane dibutyltin hydrogen borate C <sub>8</sub> H <sub>19</sub> BO <sub>3</sub> Sn (DBB)	75113-37-0	401-040-5
22	Pentachlorophenol and its salts and esters	Various	Various
23	Cadmium and its compounds	Various	Various
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 bromobenzyl bromotoluene, mixture of isomers Trade name: DBBT	99688-47-8	-
27	Nickel	7440-02-0	231-111-4
31	Anthracene oil	90640-80-5	292-602-7
	Creosote oil, acenaphthene fraction; wash oil	90640-84-9	292-605-3
	Creosote oil; wash oil	61789-28-4	263-047-8
	Creosote, wood	8021-39-4	232-419-1
	Distillates (coal tar), naphthalene oils; naphthalene oil	84650-04-4	283-484-8
	Distillates (coal tar), upper; heavy anthracene oil	65996-91-0	266-026-1
	Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline	122384-78-5	310-191-5
32	Tar acids, coal, crude; crude phenols	65996-85-2	266-019-3
34	Chloroform	67-66-3	200-663-8
34	1,1,2 Trichloroethane	79-00-5	201-166-9
35	1,1,2,2 Tetrachloroethane	79-34-5	201-197-8
36	1,1,1,2 Tetrachloroethane	630-20-6	211-135-1
37	Pentachloroethane	76-01-7	200-925-1
38	1,1 Dichloroethylene	75-35-4	200-864-0
41	Hexachloroethane	67-72-1	200-6664
42	Alkanes, C10-C13, chloro (short-chain chlorinated paraffins) (SCCPs)	85535-84-8	287-476-5
43	Azocolourants & Azo Dyes	Various	405-665-4
45	Diphenylether, octabromo derivative C <sub>12</sub> H <sub>2</sub> Br <sub>8</sub> O	32536-52-0	251-087-9
46	4-Nonylphenol, branched, ethoxylated	127087-87-0	500-315-8
	4-Nonylphenol, ethoxylated	26027-38-3	500-045-0
	Isononylphenol, ethoxylated	37205-87-1	609-346-2
	Nonylphenol C <sub>6</sub> H <sub>4</sub> (OH)C <sub>9</sub> H <sub>19</sub>	25154-52-3	246-672-0
	Nonylphenol ethoxylates (C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> C <sub>15</sub> H <sub>24</sub> O	-	-
	Nonylphenol ethoxylates (C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> C <sub>15</sub> H <sub>24</sub> O	-	-
	Nonylphenol, branched, ethoxylated	37205-87-1, 68412-54-4	500-209-1
	Nonylphenol, branched, ethoxylated, phosphated	68412-53-3	614-460-0
47	Nonylphenol, ethoxylated	9016-45-9	500-024-6
47	Chromium VI compounds	Various	Various
48	Toluene	108-88-3	203-625-9
49	Trichlorobenzene	120-82-1	204-428-0
50	Polycyclic-aromatic hydrocarbons (PAH):		
	1- Benzo(a)pyrene (BaP)	50-32-8	
	2- Benzo(e)pyrene (BeP)	192-97-2	
	3- Benzo(a)anthracene (BaA)	56-55-3	
	4- Chrysen (CHR)	218-01-9	
	5- Benzo(b)fluoranthene (BbFA)	205-99-2	
	6- Benzo(j)fluoranthene (BjFA)	205-82-3	
	7- Benzo(k)fluoranthene (BkFA)	207-08-9	
8- Dibenzo(a, h)anthracene (DBA <sub>h</sub> A)	53-70-3		
51	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	204-211-0
	Dibutyl phthalate (DBP)	84-74-2	201-557-4
	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7
52	di-'isodecyl' phthalate (DIDP)	26761-40-0	247-977-1



**REACH ANNEX XVII All products versions and articles incorporated into products do not contain/use these substances in restricted applications-**

<b>Entry No-</b>	<b>Substance name</b>	<b>CAS number</b>	<b>EC Number</b>
	di-'isononyl' phthalate (DINP)	28553-12-0	249-079-5
	di-n-octyl phthalate (DNOP)	117-84-0	204-214-7
	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	68515-49-1	271-091-4
	1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C9-rich	68515-48-0	271-090-9
54	2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3	203-906-6
55	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5	203-961-6
56	Methylenediphenyl diisocyanate (MDI)	26447-40-5	247-714-0
56a	4,4'-Methylenediphenyl diisocyanate	101-68-8	202-966-0
56b	2,4'-Methylenediphenyl diisocyanate	5873-54-1	227-534-9
56c	2,2'-Methylenediphenyl diisocyanate	2536-05-2	219-799-4
57	Cyclohexane	110-82-7	203-806-2
58	Ammonium nitrate (AN)	6484-52-2	229-347-8
59	Dichloromethane	75-09-2	200-838-9
60	Acrylamide	79-06-1	201-173-7
61	Dimethylfumarate (DMF)	624-49-7	210-849-0
62	Phenylmercury acetate	62-38-4	200-532-5
	Phenylmercury propionate	103-27-5	203-094-3
	Phenylmercury 2-ethylhexanoate	13302-00-6	236-326-7
	Phenylmercury octanoate	13864-38-5	-
	Phenylmercury neodecanoate	26545-49-3	247-783-7
63	Lead and its compounds	7439-92-1	231-100-4
64	1,4-Dichlorobenzene (p-dichlorobenzene)	106-46-7	203-400-5
65	Inorganic ammonium salts	-	-
66	Bisphenol A	201-245-8	80-05-7
67	Bis(pentabromophenyl) ether (decabromodiphenyl ether; decaBDE)	1163-19-5	214-604-9
68	Perfluorooctanoic acid (PFOA) and its salts	335-67-1	206-397-9

**REACH ANNEX XIV All products versions and articles incorporated into products do not contain/use these substances in restricted applications**

<b>Entry no-</b>	<b>Substance Name</b>	<b>CAS no-</b>	<b>EC no-</b>
1	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	201-329-4
2	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	202-974-4
3	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified	-	-
3	Hexabromocyclododecane	25637-99-4	247-148-4
3	1,2,5,6,9,10-hexabromocyclododecane	3194-55-6	221-695-9
3	alpha-hexabromocyclododecane	134237-50-6	-
3	beta-hexabromocyclododecane	134237-51-7	-
3	gamma-hexabromocyclododecane	134237-52-8	-
4	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	204-211-0
5	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7
6	Dibutyl phthalate (DBP)	84-74-2	201-557-4
7	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2
8	Diarsenic trioxide	1327-53-3	215-481-4
9	Diarsenic pentaoxide	1303-28-2	215-116-9
10	Lead chromate	7758-97-6	231-846-0
11	Lead sulfochromate yellow	1344-37-2	215-693-7
12	Lead chromate molybdate sulfate red	12656-85-8	235-759-9
13	Tris(2-chloroethyl) phosphate	115-96-8	204-118-5
14	2,4-dinitrotoluene (2,4-DNT)	121-14-2	204-450-0
15	Trichloroethylene	79-01-6	201-167-4
16	Chromium trioxide	1333-82-0	215-607-8
17	Acids generated from chromium trioxide and their oligomers	-	-
17	Dichromic acid, Dichromicacid	13530-68-2	236-881-5
17	Oligomers of chromic acid and dichromic acid	-	-
17	Chromic acid, Chromicacid	7738-94-5	231-801-5
18	Sodium dichromate	10588-01-9,	234-190-3

**REACH ANNEX XIV All products versions and articles incorporated into products do not contain/use these substances in restricted applications**

<u>Entry no-</u>	<u>Substance Name</u>	<u>CAS no-</u>	<u>EC no-</u>
		7789-12-0	
19	Potassium dichromate	7778-50-9	231-906-6
20	Ammonium dichromate	7789-09-5	232-143-1
21	Potassium chromate	7789-00-6	232-140-5
22	Sodium chromate	7775-11-3	231-889-5
23	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1
24	Arsenic acid	7778-39-4	231-901-9
25	Bis(2-methoxyethyl) ether	111-96-6	203-924-4
26	1,2-dichloroethane (EDC)	107-06-2	203-458-1
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9
28	Dichromium tris(chromate)	24613-89-6	246-356-2
29	Strontium chromate	7789-06-2	232-142-6
30	Potassium hydroxyoctaoxidizincatedichromate	11103-86-9	234-329-8
31	Pentazinc chromate octahydroxide	49663-84-5	256-418-0
32	1-Bromopropane (n-propyl bromide)	106-94-5	203-445-0
33	Diisopentylphthalate	605-50-5	210-088-4
34	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7 rich	71888-89-6	276-158-1
35	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6
36	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2
37	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6
38	Dipentylphthalate	131-18-0	205-017-9
39	N-pentyl-isopentylphthalate	776297-69-9	-
40	Anthracene oil	90640-80-5	292-602-7
41	Pitch, coal tar, high temp-	65996-93-2	266-028-2
42	4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated (covering well-defined substances and UVCB substances, polymers and homologues)	-	-
43	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	-	-

## GADSL: (Global Automotive Declarable Substance List) Update 1 February 2017

Diodes Incorporated's products may contain permutations of the following substances:

<b>Arsenic:</b>	Some products contain this substance as a dopant in the "chip" or "die"-
<b>Antimony Trioxide:</b>	Is used as a part of the flame retardant system in non-green product-
<b>Cobalt*:</b>	Some products contain Cobalt in the Alloy 42 leadframe alloy-
<b>Copper*:</b>	Some products use copper in the leadframe alloy, some others have a copper-plated Alloy 42 leadframe- Copper is increasingly being used internally in product to form connections between the die and the leadframe-
<b>Lead:</b>	Some products have a high temperature solder die attach >85% lead, some have lead in the die passivation or the glass encapsulation; others have lead in the copper leadframe alloy- All of these applications are exempted from RoHS-
<b>Nickel:</b>	Some products contain Nickel in the leadframe alloy or leadframe under plating; some have nickel in the die metallisation- All usage is wholly contained within the device and does not come into contact with the skin during normal operation-
<b>Silica, crystalline:</b>	CAS 14808-60-7 Some products contain this substance in the encapsulation (molding compound)-
<b>2,6-di-tert-butyl-p-cresol:</b>	CAS 128-37-0 Some products contain this substance in the die attach adhesive-

\*These substances are not used in GADSL-listed applications, but are included for reference-

### Rare Earth Metals:

**Our products do not contain:** Scandium, Yttrium, Lanthanum, Cerium, Praseodymium, Neodymium, Promethium, Samarium, Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, Ytterbium, Ruthenium-

### U-S- Department of Labor Federal Standard 29 – CFR Part 1910-1000 and other Substances:

Our products do not contain the following substances (in addition to those stated above):

<u>Substance name</u>	<u>CAS Number</u>
4-Nitrobiphenyl	92-93-3
alpha-Naphthylamine	134-32-7
methyl chloromethyl ether	107-30-2
3,3'-Dichlorobenzidine (and its salts)	91-94-1
bis-Chloromethyl ether	542-88-1
beta-Naphthylamine	91-59-8
Benzidine	92-87-5
4-Aminodiphenyl	92-67-1
Ethyleneimine	151-56-4
beta-Propiolactone	57-57-8
2-Acetylaminofluorene	53-96-3
4-Dimethylaminoazo-benzene	60-11-7
N-Nitrosodimethylamine	62-75-9-

### Japanese Laws:

No- 117, 1973, as last amended by Law No-49, 2003- Our products do not contain:

- N,N'> -ditoryl-para-phenylenediamine>
- N-tolyl-N'> -xylyl-para-phenylenediamine
- N> '> -dixyl-paraphenyllenediamine (CAS # 15017-02-4)

No- 32 of September 30, 1972 and Ministry of Health, Labour and Welfare Ordinance No- 47 of March 30, 2007 from the Japan International Center for Occupational Safety and Health- Our products do not contain:

- Mirex > -> CAS # 2385-85-5
- Benzidine and its salts CAS numbers 531-85-1, 92-87-5, 531-86-2
- Benzene paste (benzene 5% or more)

No- 138 of 1970, Water Pollution Control Law, Latest Amendment by Law No- 75 of 1995- Our products do not contain:

- Cyanogen compounds

## California Proposition 65 (29 December 2017)

Certain Diodes Inc- products contain lead and/or nickel- Cobalt is constituent of some leadframe alloys- Crystalline silica and Carbon Black are contained within the encapsulation (molding compound) materials- All products not defined as "green" contain Antimony Trioxide- All are wholly contained or are bound particles within the device and should not be released during normal usage-

"Green" or "Halogen-free" products are defined as:

1. RoHS and REACH Compliant
2. Bromine <900ppm, Chlorine <900ppm, Bromine+Chlorine <1500ppm, Antimony Compounds <1000ppm-

**JEDEC/ECA Halogen-Free Standard JS709A** Diodes Incorporated "Green" / "Halogen-free" product meet these requirements-

**Montreal Protocol** Diodes Incorporated products do not contain any of the listed substances-

**Stockholm Convention** (POP Regulation) (EC Regulation 850/2004) Diodes Incorporated products do not contain any of the listed substances-

**The Biocidal Product Regulation** (BPR, Regulation (EU) 528/2012) Diodes Incorporated products do not contain any of the listed substances as biocides-

\* **The following applicable exemptions are currently outlined in EVL II and RoHS II:**

- 7a Lead in high melting temperature type solders (i-e- lead- based alloys containing 85 % by weight or more lead) (Some Diodes Inc- products use this type of solder internally for die attach purposes)
- 7c-I Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e-g- piezoelectronic devices, or in a glass or ceramic matrix compound-  
Some Diodes Inc- products use glass passivation at the die level and/or glass packages which contain Lead

RoHS exemptions are reviewed and may be subject to change at least every four years- Renewal of Exemptions is expected where no viable alternative material is available-

## IEC 62474 (Replaces JIG 101)

Validity: 3 September 2017 update-

Certain Diodes Inc- products contain lead and use the exemptions stated above-

Products not defined as "Green" or "halogen-free" contain brominated flame retardants (not PBBs, PBDEs, or HBCDD) and Antimony Trioxide-

Nickel is used within certain products- This usage does not come into contact with skin in normal usage-

Our products may contain traces of any substance not purposely added and below reporting or detection levels-

E&OE-



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Date: 15 January 2018