

## ON Semiconductor Compliance with REACH

REACH is a new European Community Regulation on chemicals and their safe use (EC 1907/2006). It deals with the **Registration, Evaluation, Authorization and Restriction of Chemical substances**. The new law entered into force on 1 June 2007 and will be phased in until 2018.

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 any of the currently listed SVHCs, including newly added chemicals as of December 19, 2011.

### **ON Semiconductor assures its customers of full compliance with REACH for its products.**

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
* Aluminosilicate Refractory Ceramic Fibres			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
Cobalt dichloride	231-589-4	7646-79-9	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
Dibutyl phthalate (DBP)	201-557-4	84-74-2	10/28/2008

Substance name	EC No.	CAS No.	Date of Inclusion
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified:		25637-99-4	10/28/2008
pha-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
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	-	1/13/2010
Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	1/13/2010
**Zirconia Aluminosilicate Refractory Ceramic Fibres*		Extracted from Index no. 650-017-00-8	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

Substance name	EC No.	CAS No.	Date of Inclusion
Potassium dichromate	231-906-6	7778-50-9	6/18/2010
Sodium chromate	231-889-5	11/3/7775	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
Chromic acid,	231-801-5	7738-94-5	12/15/2010
Oligomers of chromic acid and dichromic acid, Dichromic acid	236-881-5	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	111-96-9	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>			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-(1,1,1,3,3-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

Note:

\* a)  $Al_2O_3$  and  $SiO_2$  are present within the following concentration ranges:

$Al_2O_3$ : 43.5 – 47 % w/w, and  $SiO_2$ : 49.5 – 53.5 % w/w,

$Al_2O_3$ : 45.5 – 50.5 % w/w, and  $SiO_2$ : 48.5 – 54 % w/w,

\*\*a)  $Al_2O_3$ ,  $SiO_2$  and  $ZrO_2$  are present within the following concentration ranges:

$Al_2O_3$ : 35 – 36 % w/w, and

$SiO_2$ : 47.5 – 50 % w/w, and

$ZrO_2$ : 15 - 17 % w/w,

b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres ( $\mu m$ ).

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