



December 2012

**RE: REACH SVHC Candidate List as of 12/19/2012 Product Content (Negative) Declaration**

Dear Customer:

Intel manufactures a wide range of products, from microprocessors, through embedded controllers, up to complete OEM systems. A large number of subassemblies and components are purchased from other manufacturers. Intel goes to great lengths to make sure all our products meet applicable legal requirements, and we continually monitor changes in those requirements. We have surveyed our products, and to the best of our knowledge, Intel products are in compliance with all applicable national and international laws and regulations, including those that may restrict the materials content of certain products.

Intel is frequently asked by its customer base about the presence of certain materials in its products. Please refer to Intel's Environmental Product Content Specification for Suppliers and Outsourced Manufacturers (<https://supplier.intel.com/static/EHS/environmental.htm>) for substances restricted by Intel.

In addition, the European Union's REACH regulation (Regulation No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals) places obligations as manufacturers, importers and downstream users of chemical substances and preparations. It also places obligations on importers of products. Although the REACH regulation became effective on June 1, 2007, because of delayed application dates, REACH obligations are staggered and become effective in stages; different deadlines apply over the next ten (10) years. At this time, we are not aware of any products manufactured by Intel that would require registration under REACH because "a substance is intended to be released under normal and reasonably foreseeable conditions of use." Article 7(1)(b).

We also are aware that Article 33 of REACH requires suppliers to inform the recipients and consumers if a purchased article contains more than 0.1% (by weight per article) of any substance(s) on the candidate list of Substances of Very High Concern (SVHC). The European Chemical Agency (ECHA) periodically publishes SVHC candidate list on their web site at URL:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp).

ECHA released the latest candidate list of SVHC on December 19, 2012. To the best of our knowledge, none of Intel's products contain any of the 138 SVHC above 0.1% by weight per article.

Various raw materials of glass and ceramic, such as diboron trioxide, lead oxide, lead tetraoxide, silicic acid, lead salt, etc, were included in the candidate list of SVHC. These substances were historically reported as constituents of glass and ceramic in electronic components. This was done either (1) as a shortcut in which the composition of glass and ceramic was described as the sum of its raw materials or (2) because of the difficulty of entering glass or ceramic as a substance in certain databases. After high temperature processing, these substances are chemically transformed and reacts with the other raw materials to form a glass/ceramic matrix. Therefore, glass and ceramic do not contain the raw materials used to make them. Intel products contain glass and ceramic, but do not contain these SVHC mentioned above. Our statement is in alignment with our supplier and industry positions.

We encourage all companies to participate in electronic industry efforts to update the new international IEC 62474 material declaration standard (which replaces the JIG 101 Material Declaration Standard starting in Q2 2012) to incorporate the REACH Article 33 reporting requirements. Participation in an

industry-wide approach will help maximize efficiency of reporting throughout the supply chain and reduce the inefficiencies experienced under EU RoHS when each company developed their own unique declaration format. If you are interested in participating in this industry standard initiative please contact:

- Robert Friedman, IEC 62474 Validation Team Chair at [robert.friedman@siemens.com](mailto:robert.friedman@siemens.com).

With regard to the requirement of Article 67 of REACH: A substance on its own, in a preparation or in an article, for which Annex XVII contains a restriction shall not be manufactured, placed on the market or used unless it complies with the conditions of that restriction. To the best of our knowledge, none of Intel's products contain any substances subject to any Annex XVII restrictions.

The information provided regarding the material content of our products is true and correct to the best of our knowledge and Intel has systems and due diligence processes in place to determine the content of our products and ensure compliance with all applicable laws and regulations. This information in connection with our products is subject to and limited by Intel's standard terms and conditions for sale of such products.<sup>1</sup>

Where Intel has identified products as RoHS compliant in our Material Declaration Data Sheets (MDDS) or IEC 62474 reporting formats (where available), Intel defines RoHS compliance as Lead and other banned materials in the EU RoHS directive are either (1) below all applicable substance thresholds as proposed by the EU or (2) an approved exemption applies. To find product material declarations, please go to URL <http://qdms.intel.com/MDDS/MDDSVIEW.aspx>.

If you have any questions concerning this letter, please contact your Intel Representative. We will continue to monitor the status of future REACH SVHC candidate lists as part of our on-going compliance activities.

Sincerely,



Youjiang Chen, Ph.D.  
CPRS Product Ecology Chemical Risk Assessment Program Manager  
[REACHcommunications@intel.com](mailto:REACHcommunications@intel.com)  
[http://www.intel.com/intel/other/ehs/product\\_ecology/](http://www.intel.com/intel/other/ehs/product_ecology/)

Attachments

- 1 – The latest SVHC added into candidate list on December 19, 2012
- 2 – European Semiconductor Industry Association (ESIA) Statement on Boron trioxide

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<sup>1</sup> EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.



## The latest SVHC\* added into candidate list on December 19, 2012

\*SVHC = Substances of Very High Concern

Substance Name	CAS #	EC#/ Index #	ECHA Candidate List Date	> 0.1 wt% in Intel Products (Yes/No)
Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	19.12.2012	No
6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	19.12.2012	No
Henicosafluoroundecanoic acid	2058-94-8	218-165-4	19.12.2012	No
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]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	19.12.2012	No
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]	85-42-7, 13149- 00-3, 14166-21- 3	201-604-9, 236-086-3, 238-009-9	19.12.2012	No
Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	19.12.2012	No
Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	19.12.2012	No
Lead dinitrate	10099-74-8	233-245-9	19.12.2012	No
Silicic acid, lead salt	11120-22-2	234-363-3	19.12.2012	No
4-Aminoazobenzene	60-09-3	200-453-6	19.12.2012	No
Lead titanium zirconium oxide	12626-81-2	235-727-4	19.12.2012	No
Lead monoxide (lead oxide)	1317-36-8	215-267-0	19.12.2012	No
o-Toluidine	95-53-4	202-429-0	19.12.2012	No
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3- oxazolidine	143860-04-2	421-150-7	19.12.2012	No
Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead- doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	272-271-5	19.12.2012	No
Trilead bis(carbonate)dihydroxide	1319-46-6	215-290-6	19.12.2012	No
Furan	110-00-9	203-727-3	19.12.2012	No
N,N-dimethylformamide	68-12-2	200-679-5	19.12.2012	No
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-	-	19.12.2012	No

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]	-	-	19.12.2012	No
4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	19.12.2012	No
Diethyl sulphate	64-67-5	200-589-6	19.12.2012	No
Dimethyl sulphate	77-78-1	201-058-1	19.12.2012	No
Lead oxide sulfate	12036-76-9	234-853-7	19.12.2012	No
Lead titanium trioxide	12060-00-3	235-038-9	19.12.2012	No
Acetic acid, lead salt, basic	51404-69-4	257-175-3	19.12.2012	No
[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5	19.12.2012	No
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	19.12.2012	No
N-methylacetamide	79-16-3	201-182-6	19.12.2012	No
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	19.12.2012	No
1,2-Diethoxyethane	629-14-1	211-076-1	19.12.2012	No
Tetralead trioxide sulphate	12202-17-4	235-380-9	19.12.2012	No
N-pentyl-isopentylphthalate	776297-69-9	-	19.12.2012	No
Dioxobis(stearato)trilead	12578-12-0	235-702-8	19.12.2012	No
Tetraethyllead	78-00-2	201-075-4	19.12.2012	No
Pentalead tetraoxide sulphate	12065-90-6	235-067-7	19.12.2012	No
Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	19.12.2012	No
Tricosafuorododecanoic acid	307-55-1	206-203-2	19.12.2012	No
Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	19.12.2012	No
1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	19.12.2012	No
Methoxyacetic acid	625-45-6	210-894-6	19.12.2012	No
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	19.12.2012	No
Methyloxirane (Propylene oxide)	75-56-9	200-879-2	19.12.2012	No
Trilead dioxide phosphonate	12141-20-7	235-252-2	19.12.2012	No
o-aminoazotoluene	97-56-3	202-591-2	19.12.2012	No
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	19.12.2012	No
4,4'-oxydianiline and its salts	101-80-4	202-977-0	19.12.2012	No
Orange lead (lead tetroxide)	1314-41-6	215-235-6	19.12.2012	No
Biphenyl-4-ylamine	92-67-1	202-177-1	19.12.2012	No
Diisopentylphthalate	605-50-5	210-088-4	19.12.2012	No
Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	19.12.2012	No
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	19.12.2012	No
Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	19.12.2012	No
Lead cyanamidate	20837-86-9	244-073-9	19.12.2012	No

## ESIA Statement on Boron Trioxide

The EU REACH Regulation (EC) No 1907/2006 regulates the use of chemical substances within the EU. It establishes requirements not only for manufacturers, importers and downstream users of chemical substances but also for manufacturers and importers of articles within the EU.

The European semiconductor industry association (ESIA) represents amongst its membership, the manufacturers of semiconductor devices (*'microchips'*) under *REACH; manufacturers and importers of articles*. Products delivered to our customers are considered articles without intended release of substances, under the EU REACH Regulation.

The EU REACH Regulation requires communication to customers for articles containing a Substance of Very High Concern (SVHC) above 0.1% by weight. It requires notification to the European Chemical Agency (ECHA) for Substance of Very High Concern (SVHC) exceeding one metric tonne per year and included in articles above 0.1% by weight.

EU Decision number ED/87/2012 dated 2012/06/18 added Diboron Trioxide (EU# 215-125-8/CAS# 1303-86-2) to REACH Annex XIV as a substance of very high concern (SVHC). The SVHC is boron trioxide itself.

Articles manufactured within the semiconductor industry may include Boron containing glass. Diboron trioxide may have been declared as a substance exceeding 0.1% by weight within various electronic glass or parts containing glass.

Glass is classified under REACH as an UVCB substance (substance of unknown or variable composition, complex reaction products or biological material) containing the elements silica, calcium, sodium, potassium, magnesium and other cations bonded together by oxygen; these elements are bonded into a non crystalline molecular structure with completely different properties in comparison to the starting raw materials. Glass is not a mixture of compounds such as metals or oxides like SiO<sub>2</sub>, Na<sub>2</sub>O, CaO, B<sub>2</sub>O<sub>3</sub>, etc.

Glass does not contain the oxidized chemicals in the different raw materials. ***Therefore as Boron trioxide is not present in the glass in its molecular form or Boron oxide cannot be released under normal or reasonably foreseeable conditions there are no obligations applying under the EU REACH regulation of communication to customers and notification to ECHA for articles containing glass, due to the inclusion of Diboron Trioxide (EU# 215-125-8/CAS# 1303-86-2) to REACH Annex XIV.***

About ESIA: The European Semiconductor Industry Association represents and promotes the interests of the European-based semiconductor industry and advocates for its international competitiveness. The industry provides the key enabling technology solutions for society in the fields of energy efficiency, mobility, health care, security and across the ICT sector including the realisation of the smart grid and more efficient lighting. The industry was ranked as the most R&D intensive sector by the European Commission in 2011. This sector supports around 110,000 jobs directly and up to 500,000 jobs in Europe, operating in a worldwide market valued at over \$ 299 billion (over € 215 billion) in 2011.

Website: [www.eeca.eu/esia](http://www.eeca.eu/esia)

Industry Association of:

**EECA** : European Electronic Component manufacturers' Association

Rue de la Duchesse 11/13, B-1150 Bruxelles - Belgium

Tél: + 32 2 290 36 60 • Fax: + 32 2 290 36 65 • E-mail: [secretariat.gen@eeca.be](mailto:secretariat.gen@eeca.be) • Web: [www.eeca.eu](http://www.eeca.eu)