



December 17, 2013

Freescale REACH Statement

Freescale monitors EU REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). The only provisions applicable to Freescale's products are the REACH requirements regarding articles, which apply to semiconductor products, development tools and shipment packaging. Specifically, REACH requires us:

- To inform recipients if an article placed on the European market contains a Substance of Very High Concern (SVHC) in excess of 0.1% by weight. SVHCs are identified on the European Chemical Agency (ECHA) website;
- To notify ECHA if an article contains an SVHC in excess of 0.1% by weight and the total amount of the SVHC present in all articles produced or imported to the European market exceed one metric ton per year;
- To cease shipment of articles containing REACH Annex XIV Substances Subject to Authorization unless the required authorization has been obtained; and,
- To cease shipment of articles containing REACH Annex XVII substances when restrictions apply.

Having evaluated supplier certifications and material composition declarations, as well as Freescale specifications, Freescale has, to the best of its knowledge and belief, determined that:

- Freescale products and shipment packaging materials do not contain applicable substances restricted in articles by REACH Annex XVII.
- Freescale products and shipment packaging materials do not contain substances subject to authorization under REACH Annex XIV.
- Except as noted in the attached appendices, Freescale products and shipment packaging materials do not contain any Candidate List SVHC in excess of 0.1% by weight per article.
- The weight of the SVHC candidate substances (see attached appendices) contained in Freescale articles shipped into the EU has not exceeded one metric ton per year and annual reporting to ECHA is not required.

For further details, please contact the Freescale Environmentally Preferred Products program at EPPanist@Freescale.com.

Griffin Teggeman
Manager, Environmentally Preferred Products Program
Freescale Semiconductor, Inc.

Freescale Appendix 1: REACH References

EU REACH: Candidate List of Substances of Very High Concern (SVHC)

- Last updated December 16, 2013
- The current Candidate List includes 151 line items.
- http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

EU REACH Annex XIV: Substances Subject to Authorization

- Last updated April 17, 2013
- The current list includes 22 line items.
- <http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>

EU REACH Annex XVII: Restrictions on the Manufacture, Placing on the Market and Use

- Last updated February 13, 2013
- http://ec.europa.eu/enterprise/sectors/chemicals/documents/reach/review-annexes/index_en.htm#h2-8



Freescale Appendix 2: Shipment Packaging Materials

Freescale previously reported shipment packaging materials that contained REACH SVHC candidate substances in excess of 0.1% by weight. These shipment packaging materials no longer use such REACH substances. The affected packaging materials were:

- Cobalt Dichloride (EC# 231-589-4, CAS# 7646-79-9) was designated a REACH SVHC per ED/67/2008 on 28-Oct-2010. Humidity indicator cards (HICs) sealed inside moisture control bags prior to March 1, 2009 may contain this substance. See Freescale GA13437 for details.
- DEHP (EC# 204-211-0, CAS# 117-81-7) was designated a REACH SVHC per ED/67/2008 on 28-Oct-2010. PVC containers for TSSOP24, S-MPF16 and S-MFP20 packages shipped from one contract assembly site before July 1, 2010 may contain this substance. See Freescale PCN# 14252 for details.
- Disodium Tetraborate, Anhydrous (EC# 215-540-4, CAS# 1330-43-4) was designated a REACH SVHC per ED/30/2010 on 18-Jun-2010. Cardboard over-pack boxes & tape shipped from a single USA Distribution Center before August 15, 2010 may have contained this substance.

Freescale Appendix 3: Products

Freescale has identified materials within its products that may contain REACH SVHC candidate substances in excess of 0.1% by weight. The substances are:

- Diboron trioxide (EC# 215-125-8, CAS# 1303-86-2) was designated an SVHC per EU Decision ED/87/2012 on 2012/06/18. Some suppliers of substrates, capacitors, resistors, ceramic bases / caps and non-conductive epoxy adhesive have reported this substance in their material composition declarations. It may be in excess of 0.1% by weight for affected articles. However, suppliers assert the glass composition in a finished semiconductor product is a variable crystal state that does not contain diboron trioxide.
- Hexahydromethylphthalic anhydride (EC# 247-094-1, CAS# 25550-51-0) was designated an SVHC per EU Decision ED/169/2012. Some suppliers of epoxy, die encapsulation and die underfill materials have reported this substance in their material composition declarations. It may be in excess of 0.1% by weight for affected articles.
- Lead monoxide (EC# 215-267-0, CAS# 1317-36-8) was designated an SVHC in EU Decision ED/169/2012. Some suppliers of ceramic packages, transistors, resistors and capacitors, or silver glass epoxy have reported this substance in their material composition declarations.. It may be in excess of 0.1% by weight for affected articles. However, suppliers assert the glass composition in a finished semiconductor product is a variable crystal state that does not contain lead monoxide.
- Lead titanium trioxide (EC # 235-038-9, CAS# 12060-00-3) was designated an SVHC per EU Decision ED/169/2012. Some suppliers of glass lead frit die have reported this substance in their material composition declarations. It may be in excess of 0.1% by weight for affected articles. However, suppliers assert the glass composition in a finished semiconductor product is a variable crystal state that does not contain lead titanium trioxide.