

July 19, 2011

## National Semiconductor and EU RoHS

National Semiconductor Corporation (“National”) monitors and complies with all laws and regulations that apply to its products and operations, including the European Union’s (EU) *Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment* (“RoHS 1”), as well as the recast *Directive 2011/65/EU* (“RoHS 2”).

National has evaluated the implications of RoHS 1 and RoHS 2 (collectively “RoHS”) on its products since the original Directive became law in 2003. To the best of National’s knowledge, National’s lead-free products do not contain lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs) as either intentionally added ingredients or as unintended impurities in concentrations exceeding EU regulatory limits, except as allowed by select RoHS exemption(s) on a small number of packages.

National’s current positions concerning the application of RoHS to its products and operations are discussed below.

### Applicability

#### Integrated Circuit (“IC”) Products

Although IC products do not fall directly under the scope of RoHS<sup>1</sup>, most National IC products are available in lead-free form, which is RoHS compliant. Lead-free products in certain packages contain high temperature solder die attach material with >85% lead or lead-containing ceramic substrates or glass, which are exempt by Article 4(6)<sup>2</sup> and Annex III of the RoHS Directive. Additionally, some National module products use lead in glass of cathode ray tubes, which are similarly exempt.

#### Evaluation Boards

National’s evaluation boards are “specifically designed solely for the purposes of research and development only made available on a business-to-business basis” and, per Article 2(4)(j), are not subject to RoHS.

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<sup>1</sup> The European Commission Guidance on the WEEE and RoHS Directive suggests the concept of electrical and electronic equipment (EEE) should be interpreted in line with Directive 89/336/EEC (EMC Directive), which stipulates “finished products” with “direct function” as being within its scope. IC products, which do not fulfill the intended use of the end-user on their own without “further adjustment or connections,” do not fall under this definition.

<sup>2</sup> References are to Directive 2011/65/EU (RoHS 2).

## SolarMagic Products

Per Article 2(4)(c) of RoHS, equipment that is “part of another type of equipment that is excluded or does not fall within the scope of this Directive” is likewise excluded from the scope. Since photovoltaic panels are specifically excluded per Article 2(4)(i), SolarMagic products, which are intended to only be used as part of a photovoltaic panel and can be replaced only by the same specifically designed equipment, also do not fall under the scope.

## RoHS 2 Compliance

National’s products which are compliant to the original RoHS Directive remain fully compliant with RoHS

2. National takes the following positions on RoHS 2:

1. National’s lead-free products which are compliant with RoHS by virtue of Annex III exemptions 5(a), 7(a) and 7(c)-I continue to be compliant under RoHS 2 during the validity period of these exemptions. Since these exemptions do not have defined expiry dates, the normal expiry period as stated in Article 5(2), i.e. 5 years from 21 July 2011, will apply. National is currently working with its suppliers to identify alternative substances to be implemented for these applications prior to their expiration.
2. Although not expressly restricted by RoHS 2, hexabromocyclododecane (HBCDD), bis (2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP) and dibutyl phthalate (DBP) are not contained in National’s products by virtue of their classification as Substances of Very High Concern (SVHCs) under the EU REACH regulation<sup>3</sup>.
3. National’s IC products are considered components and do not fall under the definition of “finished products.” Therefore, the CE marking, EU declaration of conformity, and internal production control provisions stipulated in Article 7 do not apply.

## More Information

Customers seeking further information on the chemical content of National’s products and their RoHS compliance status can find full materials disclosures in standard National, IPC-1752, and XML formats on National’s website at <http://www.national.com/en/packaging/greenopb.html>. For up-to-date information about lead-free status and developments at National, refer to <http://www.national.com/en/packaging/leadfree.html>. Finally, National has implemented robust systems to manage RoHS compliance. These systems are described in *National Semiconductor’s Product Stewardship Guide for Customers* at <http://www.national.com/assets/en/other/CSP-9-111C2.pdf>.

A handwritten signature in black ink, appearing to read 'Chris Lee'.

Chris Lee  
Corporate Environmental Manager  
National Semiconductor Corporation

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<sup>3</sup> Regulation (EC) No 1907/2006: *Regulation concerning the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH)*