



Frequently Asked Questions

Note: these FAQs are provided to Hampshire's customers as guidance only. The ROHS and WEEE directives and their updates will provide the most accurate information regarding compliance and enforcement. See the Links question #3 in this FAQ.

1. What's the purpose of RoHS?

RoHS, lead-free legislation, or to use its accurate title, "Directive 2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment", will be enforced throughout the European Community from July 1, 2006 forward.

The purpose of this Directive is simple – restrict the use of six substances within electrical and electronic equipment (EEE), thereby contributing to the protection of human health and the environment. The Directive seeks to limit the chance of hazardous substances possibly leaching out and polluting the environment during end-of-life recycling or disposal in landfills.

The hazardous substances and the proposed maximum concentrations levels are:

lead – Pb	.1% max concentration
mercury – Hg	.1% max concentration
cadmium – Cd	.01% max concentration
hexavalent chromium – Cr(V1)	.1% max concentration
polybrominated biphenyls – PBB	.1% max concentration
polybrominated diphenyl ethers – PBDE	.1% max concentration

Although RoHS is a European Union (EU) Directive, manufacturers of EEE outside Europe must also abide by this legislation if the equipment they produce is ultimately imported into an EU member state. Hampshire Company is therefore responding to this need for our customers. See FAQs #4 and #5.

2. What's WEEE and its purpose?

The WEEE directive requires that producers of electronic equipment who sell in EU countries label their equipment to notify customers that it needs to be recycled, take the equipment back from customers at end of life, and finance its recycling and reuse.

The WEEE directive takes effect on August 13, 2005, and manufacturers must meet target objectives for recycling by December, 2006.

3. Although not a comprehensive listing, these useful links are as follows:

<http://www.arrow.com/green/legislation.html> for updates to legislation

<http://www.pb-free.info> for review of directives in user-friendly language

<http://www.dti.gov.uk/sustainability/pdfs/finalrohs.pdf> for RoHS Directive

<http://www.dti.gov.uk/sustainability/pdfs/finalweee.pdf> for WEEE Directive

<http://www.dti.gov.uk/environment/consultations/L269directive.pdf> for ELV Directive

4. Is my product going to be lead free or RoHS compliant?

The electronics industry is most affected by the restriction on lead, as it is a key component in electronic component packaging (pins), solders and solder pastes. While the term "lead-free" is sometimes used to describe RoHS, the real requirement for manufacturers is to design and ship products that are not only lead-free but fully RoHS compliant, meaning they do not contain more than the allowances of any of the hazardous substances named in the directive.

Hampshire is committed to working with our suppliers to provide a fully-compliant RoHS solution to our customers by the July 1, 2006 deadline. In many cases for chip solutions, we will be able to provide this solution starting in the 2nd quarter of 2005. Our board solutions will be available in the first quarter of 2006. Hampshire plans to convert all affected products to RoHS compliance, and will not offer a "leaded" board or chip after July 1, 2006.

As applicable, Hampshire will comply with the WEEE Directive by the deadlines given in the legislation.

5. What has been changed on the microcontroller (chip) products that I purchase?

Hampshire purchases primarily from two manufacturers of microcontrollers (chips). The main changes have been the removal of lead (Pb) from the leadframes and the leads of the chips. Both manufacturers have done extensive qualification testing for these modified products. If you would like to receive more information about the testing, please contact Hampshire, and we will provide the information to you.

One of the manufacturers will be changing the Moisture Sensitivity Level (MSL) rating for the RoHS-compliant chips from MSL1 to MSL3. See the asterisks by affected part numbers (* or **) in Table 1.0 for FAQ #7. Hampshire will be instituting proper handling, storage, labeling, and shipping of the MSL3 chips. See IPC/JEDEC J-Std-033A July 2002 for information about MSL. Customers will need to use the appropriate methods described in J-std—033A. Hampshire can provide further information to you if you need it.

Note that this same manufacturer is currently offering an interim product where the leads on the chips are Pb-free. Hampshire is marking tubes and reels with a sticker that says Pb-free leads. These parts should not be reflowed at higher temperatures (>230 degrees C)

because they may not maintain full reliability. See the asterisks by affected part numbers (* or **) in Table 1.0 for FAQ #7.

6. What has been changed on the circuit board products that I purchase?

The conversion of our board products to RoHS-compliance will involve changes to all components and materials on the boards. More details regarding the changes and testing will be available in January 2006.

7. Hampshire Part Numbers and Conversion Status Update

TABLE 1.0

Part Number	Expected Conversion Date	Part Number	Expected Conversion Date
HU12-100D0	4 th quarter 2005**	HS10-100D0s	Available
HU12-100S0	4 th quarter*	HS10-100S0s	Available
HS12-100D0o HU12-100D0o HC12-100D0o	4 th quarter 2005**	HX12-100D0s	Available
HS12-100S0o HU12-100S0o HC12-100S0o	4 th quarter 2005*	HX12-100S0s	Available
		HX12-100S1s	Available
HS12-100D0	Available	HX12-100S3s	Available
HS12-100S0	Available	HX12-100SAs	Available
HS12-100P0	Available	HX12-100P0s	Available
HS08-100D0 HP08-100D0	Available	HX12-100PAs	Available
HS08-100S0 HP08-100S0	Available	HX12-100PIs	Available
HS08-100P0 HP08-100P0	Available	HR12-109D0	TBD

NOTE: X = S, T, I, or C part numbers

* SOIC or SSOP, currently with Pb-free leads, will have an MSL 3 rating for RoHS parts

** DIP chip currently with lead free leads, may be MSL 3 for RoHS parts