



RoHS Compatibility

mec will be offering RoHS compatible products from 1 January 2005



We are pleased to announce that we will be offering RoHS compatible products from 1 January 2005

Today most of our products are RoHS compatible. Please check the folder 'Part numbers and RoHS status' to the left. For the parts that are not compatible today a special version will be made available with a special part number.

Products that are lead free and comply with the RoHS directive and are process compatible will have 'RA' added in the beginning of each part number. Products that are lead free and comply with the RoHS directive but for temperature reasons cannot be made process compatible will have 'RB' added in the beginning of the part number.

A full package of information is available as per the folders to the left.



Lead Free and RoHS Compatibility Statement

1. Scope

1.1 Motivation

The European Union RoHS directive 2002/95/EC has driven the industry to reduce the content of hazardous materials. mec is committed to make components compatible in time to ensure our customers a smooth transition to conform with the new requirements. Furthermore mec is committed to limit the effect on the environment from our operations and mec wants to participate in promoting a cleaner world in the future.

1.2 Objective

Our objective is to comply with the RoHS directive 2002/95/EC. The relevant products shall also be process compatible with the higher soldering temperatures in a typical lead free soldering process.

1.3 Specific actions

All vendors and subcontractors will be instructed to deliver products only that comply with the new directives. This is made specifically to secure that mec will

- meet specified limit in 2002/95/EC regarding Mercury, Cadmium, hexavalent Chromium and especially lead in all solderable platings (note 1)
- meet specified limit in 2002/95/EC regarding polybrominated biphenyls (PBB) and polybrominated biphenyl ethers (PBDE) (note 2)
- Investigate the process compatibility of the products that are to be soldered (products with a RA prefix).

2. Applicable documents

IEC 68-5-54/EN60068-5-54, Solderability leaded components

IEC 68-2-69/EN60068-2-69, Solderability surface mount components

IPC/JEDEC J-Std 020B Moisture/Reflow Sensitivity



3. Definitions

3.1 Lead free

Products will be considered lead free when

-Lead is not intentionally added to the product or raw material and
-lead content due to impurities is less than or equal to 1000ppm.
Lead may exist as an intentional additive as an alloying element in copper or steel.

3.2 EU directive 2002/95/EC re RoHS compliance

Products that comply with the Restrictions on Certain Hazardous Substances (RoHS) directive do not:

- A. contain intentional additions of lead, hexavalent chromium, cadmium or mercury
- B. contain intentional additions of PBB (polybrominated biphenyl) or PBDE (polybrominated diphenylether)
- C. contain unintentional additions of lead, hexavalent chromium and mercury that exceed 1000 parts per million (PPM) and cadmium that exceed 100 parts per million (PPM).

3.3 lead free process compatible components

Lead free process compatible components suffer no loss of form, fit or function after exposure to the thermal excursions required for lead free soldering. Components that are reflow solderable shall conform to IPC / JEDEC J-STD-020B with maximum temperatures of 245°C and / or 260°C. Please see encl.1 for recommended solder profile.

3.4 Product groups RA and RB

The parts of our products that are not yet compliant with the objectives set out in this standard have been divided into two groups:

- A) Products that are soldered onto a PCB and need solderable plating and have to be compatible with soldering heat.
- B) Products that are not soldered including accessories and other parts that can be installed on a product from group 1 after the soldering process.



Products from group A (among other basic switches) shall be lead free (3.1) RoHS compatible (3.2) and lead free process capable? (3.3)
Products manufactured in accordance with these objectives will be given the prefix RA.

Products from group B (mainly accessories) shall be lead free (3.1) and RoHS compatible (3.2). Group 2 products, however will not need to be process compatible as they are not intended to pass a soldering process. Some switches may be in group B if they cannot be upgraded to lead-free process capable.
Products manufactured in accordance with these objectives will be given the prefix RB.

The part of our products that are RoHS compatible either as defined in group A or group B without further change will maintain their existing part number and be listed on the RoHS status part number list, please see encl. 3. They will be fitted with a RoHS compliance label for deliveries after 1/1-2005.

4. Principles

If the product performance documentation includes a requirement for solderability, the product will meet the solderability requirement with both tin-lead and lead free solder processes. Please see solderability test encl. 2.

5. Procedures

5.1 Timescale

From 1 January 2005 mec will be offering all products either compliant or with a RA or RB compliance option.

Until at least 30 June 2005 we will continue to offer non compliant versions.

5.2 Storage management, traceability and marking

The traceability of new RoHS compliant products are secured by specific new part numbers with the RA or RB prefix. Existing products that are already compliant will maintain their existing part number. All packaging will be labelled accordingly and specific switches can be traced individually on their date code marking. All RoHS compatible products will be labelled with the label specified in encl. 4 "RoHS/2002/95/EC".

For the entire supply channel we urge you to implement the prefix part numbering system in your own system, and to ensure that existing stock is eliminated systematically following the FIFO principle.



6. Communication to customers

6.1 mec will notify all customers trading directly with mec about the changes being implemented.

6.2 The authorised distributors of mec products will have the entire responsibility for notifying their customers and their partners. The distributors shall also ensure compliance with specific contractual or legal requirements. Any information from the customers regarding the mec products and their RoHS compliance must be presented to mec in writing.

6.3 After the date that mec officially cease to ship non compliant products or 1 July 2006, whichever comes first, the authorised distributor of mec must clearly inform any of their customers if a product shipped is non compliant with the RoHS directive. This information must be presented with a non compliant RoHS label and in writing on the order confirmation and the invoice.

7. Assurance Audits

The Quality Assurance organization shall ensure that the requirements of this document are included in the scope of the Quality Assurance audit plans. The results of the audits shall be documented and submitted for review by the management.

8. Revision

This document is subject to change without further notification. Pending version will be available on our website www.mec.dk.

Note 1

It is known that the lead addition to solderable plating has a very positive effect on the solderability and the storage life. By converting to lead free platings we must expect degradation in the above. We have initiated a solderability test of switches for the RB versions and can document solderability still meeting the relevant specifications, please see encl 2. The storage life has also been tested for representative products of the RA versions. A good storage life has been documented, please see encl 4.

Note 2

The purpose of adding PBB and PBDE is among others to improve the fire extinguishing properties. For both the RA and RB versions there is a risk that the UL ratings will have to be downgraded. Specific UL ratings for the RA and RB version are listed in encl. 3.



Encl. 1

Recommended Solder Profile

Encl. 2

Solderability Tests

- Multimec low temp through-hole and surface mount high temp
- Unimec low temp and high temp

Encl. 3

List with all Part Numbers and their RoHS and UL Status

Encl. 4

Storage Life for Products with Solderable Plating