

Caddock Resistor Products and the RoHS Directive

The scope of the RoHS Directive has been changing over the past year so that its present scope has become more limited. Presently, the scope of the RoHS is mainly focused on "personal use" electronics (the kind of electronics that can be found in the home and the office, as well as, portable tools). "Personal use" electronics, with its short life cycle, contributes the greatest amount to the electronics equipment waste stream.

"RoHS Compliant" Caddock Resistor Products:

"RoHS Compliant" Caddock Resistor Products are those which comply with the European Union's Restriction on the Use of Hazardous Substances (RoHS) in Electrical and Electronic Equipment Directive 2002/95/EC, which means that either 1) the levels of Lead(Pb) and other materials in the resistor product are below the applicable substance thresholds as proposed by the European Union or 2) an approved/pending RoHS exemption applies to the resistor product. Please note that RoHS implementation details are not fully defined and are subject to change.

The following Caddock Resistor products are "RoHS Compliant" with the EU RoHS Directive requirements. The following Caddock products are also compatible with "Lead-free" soldering processes.

- Type CC resistors
- Type CHR Resistors
- Type HVD Dividers
- Type MS Resistors (with catalog version lead finish)
- Type MG Resistors (with catalog version lead finish)
- Type MV Resistors (with catalog version lead finish)
- Models MP915, MP916, MP925, MP930, MP9100
- Models MP808, MP816, MP825, MP850
- Model MP2060 (beginning with date code 0612)
- Type TF Resistors
- Type TG Resistors (with catalog version lead finish)
- Type THV Resistors (with catalog version lead finish)
- Type USF Resistors
- Type USG Resistors
- Type USVD
- Type T912 and T914
- 1776-XXX and 1776-CXXX
- Type 1787
- Type 1789
- Type T1794

Some of these Caddock Resistor products are supplied, based on specific customer requirements, with "value added" hot solder dip lead finish (Sn63/Pb37). The hot solder dip lead finish (Sn63/Pb37) is compliant with applicable military and aerospace standards, but is not compatible with the RoHS Directive requirements.

Some Caddock Resistor Products are intended for use in Applications that are outside the scope of the RoHS Directive.

The following Caddock Resistor Products are not compliant with the EU RoHS Directive requirements as of the release date of this AEN document. These Resistor Products* are to be used in the equipment categories not covered by the RoHS. [Category 8 - Medical Equipment, Category 9 - Monitoring and Control Equipment (such as measurement Instruments, traffic controls, power distribution, etc.), Military and Aerospace equipment,* Trains and Commercial Aircraft, Stationary Industrial Equipment (such as: Large machine tools, electrical switching equipment, large welding equipment, large robots, elevators, large generators, large motors and motor controls, etc.), High Voltage equipment operating at voltages above 1000VrmsAC or above 1500VDC.] These following Caddock Resistors products are compatible with common Sn/Pb and Sn/Pb/Ag soldering processes:

- Type ML (Replaceable with Type MS, if necessary)
- Type MM (Replaceable with Type MS, if necessary)
- Type MK
- Type MX (Replaceable with Type MG, if necessary)
- Type TK
- Type TN
- Models MP312 and MP330
- Type CD ("RoHS Compliant" but soldering temperature limited)
- Type LC ("RoHS Compliant" but soldering temperature limited)
- Model MP725 ("RoHS Compliant" but soldering temperature limited)
- Models MP820 and MP821 (Replaceable with Model MP930)
- Note: RoHS compliant versions of the MP820 and MP821 are anticipated for release in 2007.
- Type SR ("RoHS Compliant" but soldering temperature limited)

*Some devices are not recommended for military and aerospace. Contact Applications Engineering for assistance.

Additional Documents:

- AEN-0104 Title: Lead(Pb)-Free Soldering Compatibility with Caddock Resistor Products
- AEN-0106 Title: Customer Applications that are outside the scope of RoHS Directive.

IMPORTANT NOTE: It is anticipated that there will be additional changes, in the future, to the requirements that will be part of the RoHS Regulations. These future changes may effect the compliance of any electronic component. If there is a change in the RoHS Requirements that effects compliance of a Caddock Resistor Product, we will provide timely notification on the Caddock website: caddock.com.