Customer Applications that are outside the scope of 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.

Many OEM "electronics equipment" products are exempt from the scope of the RoHS Directive and will be exempt from the future "RoHS Regulations" that are not yet fully defined or released. Thus, RoHS compliance of components, used in these exempt "high performance" electronics equipment product categories, is not required. Some of the RoHS exempt equipment categories are:

- 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

Over 90% of Caddock Resistors are used by our customers in high performance equipment that are in these exempt product categories.

This equipment is exempt from the RoHS Directive for a good reason. This exempted equipment has very high "reliability performance" requirements with very long lifetimes (10 to 25 years). This exempted equipment forms the modern electronic infrastructure that is relied upon to support society. Reliability is of the greatest concern for this equipment. True reliability confidence is built upon many years of testing and field experience. Importantly, the "reliability performance" is often the basis for the Caddock high performance resistor being selected by the "equipment" design engineering of our OEM customers. Most of our significant OEM customers who develop equipment in these exempted equipment categories have specifically asked Caddock for our assurance that the Caddock Resistors we supply will not be changed, in any way, because of the RoHS directive.

With this background it is important to know that we have many general requests about RoHS compatibility mainly from EMS and Contract Manufacturers but not frequently from our OEM customers for these exempt product categories.

Caddock manufacturers high performance, high-reliability, long-life resistor products that are selected by OEM design engineering for the high performance benefits of these Caddock Resistors. Caddock strongly defends the OEM engineering's choice of the Caddock resistor that has been specified to be used in each equipment product. We will continue to supply the same Caddock Resistor that was originally designed into the OEM's product until a part change has been approved by the OEM Engineering (or by the OEM's designated sustaining engineering activity). Caddock will not change a Caddock Resistor in an OEM program without specific direct involvement between Caddock and the OEM's engineering.

The RoHS Directive is in the process of being transposed into the EU RoHS Regulations. There are many outstanding issues that need to be resolved before the EU RoHS Regulations can be presented to the EU Parliament for approval. These are issues regarding the scope, "material use" exemptions, grace periods, the compliance protocol, the methodology for material concentration assessment, reporting, and others. The EU RoHS Regulations will be released sometime in the future.

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.

Additional Documents:

AEN-0104 Title: Lead(Pb)-Free Soldering Compatibility with Caddock Resistor Products

AEN-0105 Title: Caddock Resistor Products and the RoHS Directive.