

December 2016

**RoHS Position Statement  
Altronic LLC****General**

RoHS is the EU Directive that restricts the use of certain hazardous substances in electrical and electronic products (EEE products). It is an “open scope” directive which means that by July 22, 2019 it will apply to all EEE products that are “dependent on electric and electromagnetic fields for at least one intended function.” The current list of restricted substances is found in Annex II of the directive and currently includes: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), bis (2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DPB) and diisobutyl (DIBP).

The RoHS III directive is formally titled:

**DIRECTIVE 2015/863/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
of June 8, 2015  
on the restriction and the use of certain hazardous substances in electrical and  
electronic equipment**

Full text and information can be obtained at:

<http://2016.export.gov/europeanunion/weerohs/rohsinformation/>

**Discussion**

Article 2 – SCOPE, of the RoHS III document, provides a list of exemptions and exclusions:

**Exemptions**

RoHS III exempts certain applications from the substance restrictions. The exemptions are temporary and reviewed at least every four years. The current list of exemptions is contained in Annex III of the RoHS document.

**Exclusions**

Permanent exclusions from RoHS include the following: military equipment, space equipment, equipment designed to be part of another piece of equipment falling outside of the scope of RoHS, large scale industry tools, large scale fixed installations, means of transport for person or goods,

non-road mobile machinery, active implantable medical devices, photovoltaic panels, equipment for research and development only available business to business. The European Commission adopts a very narrow interpretation of the categories of products to which these exclusions apply.

For the purposes of this document, RoHS III provides the following definitions in Article 3 - DEFINITIONS:

**‘Large-scale stationary industrial tools’** means a large-scale assembly of machines, equipment, and/or components, functioning together for a specific application, permanently installed and de-installed by professionals at a given place, and used and maintained by professionals in an industrial manufacturing facility or research and development facility;

**‘Large-scale fixed installation’** means a large-scale combination of several types of apparatus and, where applicable, other devices, which are assembled and installed by professionals, intended to be used permanently in a pre-defined and dedicated location, and de-installed by professionals;

### **Altronic Position**

It is Altronic’s position that where its products are installed on stationary industrial engines where the installation conforms with the definitions of large-scale industrial tools, and large-scale fixed installations (above), its parts and systems, along with the engines on which they are installed, are part of the RoHS II permanent exclusion, and are therefore in full compliance with the RoHS II directive.

In light of this and the permanent exclusions outlined above, Altronic uses tin-lead solder in its manufacturing processes, as this produces a superior quality product, as required in the harsh and demanding environments and applications of stationary industrial engines.

For customers that demand the use of lead free solder, Altronic can produce such parts. However, the customer needs to be aware of the following:

1. The production of electronic circuit boards using lead free solder may result in increased costs, which will result in increased prices of final assemblies.
2. The use of lead free solder brings the associated risk of product service life. These involve risks which impact the service life of the product required to operate as desired in the defined environmental applications. The impact is primarily premature failure of the solder joint interface and functional failures caused by tin whiskers, a phenomenon which is yet not well understood, but whose existence is well documented.

As a result of these risks, Altronic reserves the right to offer any product produced with lead-free solder under reduced or limited warranty terms. These will be addressed on an individual basis based on the product and application.