

## Statement of Compliance with EU RoHS Standards

March 1, 2023

Directive 2011/65/EU of the European Parliament and of the Council, regarding the “restriction of the use of hazardous substances in electrical and electronic equipment” (RoHS 3, Directive 2015/863), requires that products placed on the European Union market comply with certain maximum permissible concentration limits in homogeneous materials of the following restricted substances:

- Cadmium - (0.01% by mass or 100 PPM)
- Mercury - (0.1% by mass or 1000 PPM)
- Lead – (0.1% by mass or 1000 PPM)
- Hexavalent chromium - (0.1% by mass or 1000 PPM)
- Polybrominated biphenyls (PBB) - (0.1% by mass or 1000 PPM)
- Polybrominated diphenyl ethers (PBDE) - (0.1% by mass or 1000 PPM)
- Bis(2-ethylhexyl) phthalate (DEHP) - (0.1% by mass or 1000 PPM)
- Butyl benzyl phthalate (BBP) - (0.1% by mass or 1000 PPM)
- Dibutyl phthalate (DBP) - (0.1% by mass or 1000 PPM)
- Diisobutyl phthalate (DIBP) - (0.1% by mass or 1000 PPM)

Many of the products developed by Exxelia Ohmcraft, are purchased for inclusion as components in devices affected by this directive. Therefore, Exxelia Ohmcraft has implemented specific procedures to ensure that products to which RoHS applies conform to RoHS regulations. This is accomplished by a requirement for suppliers of materials included in the products of Exxelia Ohmcraft to provide documentation of the RoHS compliance of these materials. Please note that Exxelia Ohmcraft does not verify this documentation through independent analytical testing.

In certain cases, Exxelia Ohmcraft is unable to obtain this information from the suppliers of its raw materials and must rely on the accuracy and completeness of Materials Safety Data Sheets (MSDS) provided by the suppliers of our raw materials to determine the RoHS compliance status of our products. These MSDS may include incomplete substance content information as a means of protecting proprietary information.

Some non-RoHS compliant products remain available for purchase upon request. The following pages describe the RoHS compliance status of the components produced by Exxelia Ohmcraft, which can be determined by part number. The products declared to be compliant with Directive 2011/65/EU of the European Union (and its subsequent amendments), are compliant by exemption 7(c)-I.

Regards,



Vivek Sharma  
Corporate Quality Manager

**Surface-Mount (Chip) Resistors:**

The compliance of an Exxelia Ohmcraft chip resistor is determined by its termination type, as all other materials in our T, Z, and G chip resistors are RoHS compliant (often by exemption; see above).

Our Surface-Mount Resistors Include:

- HVC High-Voltage Chip Resistors
- SM Chip Resistors
- MCH Military High-Voltage Chip Resistors
- HC Bondable Chip Resistors

The following table shows whether each termination type is RoHS compliant:

Terminations NOT RoHS Compliant:	RoHS Compliant Terminations:
B Termination Sn63Pb37 Dip on Pd/Ag	T Termination Sn99.9 on Ni Barrier
S Termination Sn63Pb37 Dip on Pt/Pd/Ag	Z Termination Sn96.3Ag3.7 or Sn99.9
	G Termination Au Bondable Termination

For details, please see our Termination Material Data Sheet Attachment at [www.ohmcraft.com](http://www.ohmcraft.com)

**Flat Leaded Resistors:**

Leaded resistors are produced with either wire leads or spade leads, as indicated in each product's part number. All Exxelia Ohmcraft wire-leaded resistors are RoHS compliant, while the RoHS compliance of spade-leaded resistors varies (see below).

Leaded Resistors Include:

- HVR High-Voltage Leaded Resistors
- HVD High-Voltage Leaded Resistor Dividers
- CN Custom Leaded Resistor Networks

Whether a leaded resistor has wire or spade leads may be determined by its part number. For example:

Lead Type	Example P/N	RoHS Compliant?	Material Plated on Leads
Wire Leads	HVRW42H1005F	Yes	Sn Plating on Cu
Spade Leads	HVRT42H1005F	Yes	Sn Plating
Spade Leads	HVRS42H1005F	No	Sn60Pb40 Plating

**Axial Leaded Resistors:**

- High Voltage Axial Leaded Resistors

High Voltage Axial Leaded Resistors are available with RoHS compliant leads. For example:

Example P/N	RoHS Compliant?	Material Plated on Leads
HVAG05K1006F1	Yes	Au Plating on Cu
HVAG36K5005F1	Yes	Au Plating on Cu