

RoHS Compliance Statement

Knowles Cazenovia a leading supplier to the electronic components market is fully committed to offering products supporting Restriction of Hazardous Substances (RoHS) directive 2002/95/EC, ROHS2 Directive 2011/65/EU and amendment 2015/863/EU. All of our dielectric formulations are RoHS compliant and we offer a broad range of capacitors free of Lead in the terminations. Knowles Cazenovia complies with the requirements of the individual customer and will maintain product offerings that meet the demand of our industry.

Product line Summary

Single-Layer Capacitors: All offerings are Lead-Free and **RoHS compliant**.

Thin Film Devices: Devices with Metal Covers attached: **RoHS compliant**.
Devices without covers: **Lead Free and RoHS compliant**.

Trimmer Capacitors: *All hardware and products manufactured or processed are RoHS compliant with exemptions for specific products.*

- Cadmium: Concentrations of cadmium in excess of 0.01% may be found in parts which contain industrial sapphires by Exemption 8(b) - Cadmium and its compounds in electrical contacts.
- Lead: Concentrations of lead in excess of 0.1% may be found in Voltronics brand products in the following circumstances (Exemptions 5, 6, or 7):
 - The glass and ceramic of certain capacitor bodies.
 - High melting temperature type solders.
 - As an alloy component in brass materials.

Multi-Layer Capacitors: RoHS compliant products are available through selection of RoHS Compliant termination codes. These termination styles satisfy the requirements of the RoHS directive, and are compatible with either a Lead-free or a Tin-Lead reflow process. Below are the terminations codes available on MLC products:

• P	(Non-Magnetic) AgPd Termination	RoHS Compliant
• S	Ag Termination, Ni barrier, Gold Flash (5 μ")	RoHS Compliant
• Z	Ag Termination, Ni barrier, Sn Plated Solder (200 μ" matte)	RoHS Compliant
• U	Ag Termination, Ni barrier, SnPb Plated Solder (90% Sn, 10% Pb)	
• T*	Ag Termination, Ni barrier, Heavy SnPb Plated Solder (62% Sn, 36% Pb)	
• E	Ag Termination, Enhanced Ni barrier, Sn Plated Solder	RoHS Compliant
• Q	Polymer Termination, Ni barrier, Sn Plated Solder	RoHS Compliant
• Y	Polymer Termination, Ni barrier, SnPb Plated Solder	
• M	(Non-Magnetic) Polymer Termination, Cu barrier, Sn Plated Solder	RoHS Compliant
• W	(Non-Magnetic) Ag Termination, Cu barrier, Sn Plated Solder	RoHS Compliant
• H	(Non-Magnetic) Ag Termination, Enhanced Cu barrier, Sn Plated Solder	RoHS Compliant
• V	(Non-Magnetic) Ag Termination, Cu barrier, SnPb Plated Solder (90% Sn, 10% Pb)	
• R	(Non-Magnetic) Ag Termination, Cu barrier, Heavy SnPb Plated Solder (62% Sn, 36% Pb)	

**T term: special request only*

As long as we have customers whose applications demand a Tin/Lead termination, Knowles Cazenovia will continue to make this option available. Our sales and marketing staff are ready to answer all your inquiries regarding RoHS compliant qualification samples and to help make the transition to RoHS compliant capacitors as smooth as possible.