

Description

CA-SE is a two part electrically conductive adhesive. Manufactured from an epoxy resin loaded with conductive silver filler. This material is to be mixed and applied at room temperature. It forms a structural bond that is electrically conductive. Once cured it adheres strongly to most substrates.

Main Features

- ⚡ Very high bond strength.
- ⚡ Room temperature cure.
- ⚡ Flexible – degree is variable by adjusting mix ratio.
- ⚡ Resistant to fracture.
- ⚡ Safe for use with most substrates.
- ⚡ Excellent resistance to ageing.
- ⚡ Wide service temperature range
- ⚡ Stable – low joint resistance through temperature cycling.

Availability

CA-SE is supplied as standard in 4ml, 10ml and 50ml double to ensure it correctly dispensed at a 50:50 ratio. Alternatively, this material can be supplied in separate syringe barrels where variable mix ratios are to be used.

Technical Data

Colour	Silver
Density	3.0 gcm ⁻³
Cure Time (at room temperature)	24 Hours
Volume resistivity	<10Ωcm ⁻²
Adhesion	600 Ncm ⁻²
Thermal conductivity	4.8 Wm ⁻¹ K ⁻¹
Service temperature range	-50°C to 200°C

Storage

When not in use that the material is stored in a cool dark, dry place. For best storage conditions we would recommend some form of refrigerated storage such as a freezer. If kept properly sealed and in a suitable location, then the material should remain usable for up to 6 months.

Handling

When using this material observe usual standards of industrial hygiene/practice. Avoid skin/eye contact and work in a well ventilated area. For more detailed information, please refer to the MSDS (Material Safety Data Sheet)

Instructions for use

Surfaces should be clean dry and free from loose material. It is recommended that areas to be bonded are cleaned using a suitable solvent prior to applying the sealant.

To ensure the highest level of electrical performance it is essential that the surfaces to be bonded have a low contact resistance. This means than materials that have a naturally occurring oxide layer such as aluminium alloys may need to be lightly abraded and cleaned directly prior to bonding.

Ensure the two components are thoroughly mixed. Once mixed this material has a working (or pot) life of approximately one hour depending on the ambient temperature and can be transferred to a syringe for precise application if required.

Assemble the parts as soon as possible, ideally within 15 - 30 minutes of the adhesive application.

In most cases, the parts may be handled after 12 hours but avoid stressing the joint until full cure has been achieved. This is usually after 48 Hours.

The adhesive will fully cure within 3 hours at 60°C. If curing at elevated temperatures, allow the adhesive to cure at room temperature for a minimum of one hour before heating. Curing at elevated temperatures improves both the electrical and mechanical properties of the bond.

Excess material should be removed with a suitable tool. Smaller traces of the uncured material may be removed by wiping with a lint free cloth damped with methylated spirit, isopropyl alcohol or MEK taking care to observe the safety precautions required in using flammable/harmful solvents of this type.