

Description

EW 6345HDL is a one-part, solvent-free, thermally conductive epoxy. Its typical application is for structural bonding where high thermal conductivity is required.

Features

- Recommended substrates: FPC, PCB, aluminum, ceramics, copper
- Low shrinkage
- Fast curing speed
- High temperature resistance and low CTE
- High thermal conductivity

Uncured Properties

Chemical Type	Epoxy
Appearance	Black
Viscosity @ 25°C [mPa·s] Brookfield DV2T, spindle 14# @ 4rpm	50,000
Specific Gravity [g/cm³]	~2.5
Shelf Life @ 0-10°C [months]	6
Pot Life @ 25°C [hrs]	72

Curing Conditions

Thermal Curing @ 150°C [mins]	30
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Cured Properties

Hardness [Shore D] ASTM D2240	90
Lap Shear Strength [MPa] Al to Al ASTM D1002	>15
Elongation at Break [%] ASTM D638	1.5
Thermal Conductivity [W/m·K] ASTM D2214	2.0
Glass Transition Temperature (Tg) [°C] ISO 11359	120

Coefficient of Thermal Expansion (CTE) [ppm/K] below Tg above Tg ASTM E831	35 72
Surface Resistivity [ohm·cm] ASTM D257	>1.0x10 ¹⁴
Volume Resistivity [ohm·cm] ASTM D257	>1.0x10 ¹⁴
Dielectric Strength [V/mil] ASTM D149	350
Water absorption [%] ASTM D570	<0.2

Directions for Use

1. Surface Treatment

Surfaces to be bonded should be free of dust, oil, grease or any other contaminants in order to achieve a reproducible bond. For slightly contaminated surfaces, it is sufficient to wipe with isopropanol or ethanol. Substrates with a low surface energy (e.g. polyethylene, polypropylene, Teflon) need to be pre-treated physically (e.g. atmospheric plasma or corona) in order to achieve sufficient adhesion.

2. Application

Products are supplied ready for use. Depending on package type, they can be dosed manually, semi-automatically or fully-automatically with a dosage apparatus. With automatic dispensing using a cartridge, the adhesive is conveyed via pressure and a piston rod to a dispense valve. With bottles, the adhesive is conveyed using a pump.

After application, it is recommended that the two substrates be adjoined immediately as it is possible the curing process will begin with select products under ambient conditions.

3. Suggested working temperature range is -40 to 180°C.

Storage

Maximum shelf life may be obtained when product is stored in a cool, dry location at a temperature between **2°C to 8°C**.

TO PREVENT CONTAMINATION OF UNUSED PRODUCT, DO NOT RETURN ANY PRODUCT TO ITS ORIGINAL CONTAINER.

Allow the product to thaw for two hours after it is removed from the refrigerator prior to use. It is best practice to wipe away any moisture on the surface of the syringe with cleanroom wipes.

Materials Handling

Refer to the Material Safety Data Sheet (MSDS) for this product.

Disclaimer

The information provided here including the recommendations for use and application of the product is based on internal laboratory test conditions and should only be used as a reference. CollTech does not assume responsibility for the test or performance results obtained by the user. It is the responsibility of the user to perform their own evaluations to confirm whether this product is suitable for their application.