

Silvertech Epoxy

CHEMICAL PRODUCT

PRODUCT NAME: Silvertech Epoxy

MATERION MATERIAL NUMBERS: 102738 (50 gram kit), 102739 (100 gram kit), 102740 (250 gram kit),

OPERATING TEMPERATURE RANGE: -60°C - 175°C continuous, intermittent to 250°C

SHEAR STRENGTH: 1200 psi @25°C

THERMAL CONDUCTIVITY: $\sim 1.05 \times 10^{-2}$ W/cm - °C

VOLUME RESISTIVITY:

Cured at room temperature: 0.003 Ω-cm @25°C

Heat cure 1/2 hour at 150°C: 0.0005 Ω-cm @25°C

SHELF LIFE (20°C): 4-5 months

POT LIFE (20°C): ~ 1 hour

PROPERTIES

Silvertech Epoxy is a silver-filled, thermally and electrically conductive epoxy specifically manufactured for the sputtering target industry.

- Exhibits good thermal & electrical conductive properties
- Designed to replace metallic solder bonding where high operating temperatures are required
- Designed to avoid CTE mismatch concerns when bonding brittle target materials to copper backing plates

AVAILABILITY

Silvertech Epoxy is available in 50g, 100g, and 250g kits. To determine the correct kit for the application, consult the following chart, or calculate as 2g Silvertech Epoxy for each 1 inch² of bond area.

Target Size:	Up to 5" dia.	6" -8" dia.	9" -12" dia.	5" x 15"	5" x 20"
Kit Required:	102738 (50g)	102739 (100g)	102740 (250g)	102740 (250g)	102740 (250g)

HOW TO APPLY

1. Measure equal quantities of Part A and Part B (by weight or volume) on a clean paper or cardboard surface. Using the enclosed wooden spatulas, mix the two parts together until completely combined. (Equal amounts by volume will also operate properly.) Combined epoxy may be thinned with toluene; however, toluene must be evaporated off before heat curing.
2. Clean both bond sides of target and backing plate completely. Apply mixed epoxy to both pieces.
3. Press the two pieces together. Remove excess epoxy with enclosed swabs. Residual uncured epoxy may be wiped clean with methanol or toluene.
4. Cure for 24 hours @ room temperature, or three hours @ 60°C.

CAUTION: Avoid eye and skin contact. Wash off affected area with soap and water. Refer to SDS for each part before use or disposal.