Epoxy Potting Compound

RoHS Compliant

Description

This is a 2-part, low-viscosity, black, general purpose epoxy potting compound. The epoxy cures to a rigid finish, making it suitable for protecting circuits from physical impacts such as shocks and vibrations. The low mixed viscosity enables superior wetting that ensures complete encapsulation for even the most complicated circuit geometries.

This protects against harsh environmental exposure such as humidity, salt water, fungus, corrosive gases and many harsh chemicals. The epoxy is also electrically insulating and protects circuits from static discharge and arcing.

Features and Benefits

- Convenient 1:1 mix ratio
- Low mixed viscosity of 2 100 cP
- Adheres to many substrates, including plastic, ceramics, metals and glass
- Excellent electrical insulating properties
- Resistant to humidity and water (allows for submersion when needed)
- Solvent-free

Storage and Handling

Store between 16°C and 27°C in a dry area.

Usage Parameters

Working Time	: 45min
Mix Ratio by Volume	: 1:1
Mix Ratio by Weight	: 1.1:1

Cured Properties

Resistivity	: $3.8 \times 10^{12}\Omega$cm
Breakdown Voltage @ 3.5 mm	: 45 160 V
Dielectric Strength @ 3.5 mm	: 348 V/mil
Hardness	: 80 D
Tensile Strength	: 27 N/mm^2
Compressive Strength	: 96 N/mm$_2$
Lap Shear (stainless steel)	: 7.3 N/mm^2
(aluminum)	: 7.8 N/mm^2
Glass Transition Temperature (Tg)	: 51°C
CTE Prior T_g	: 51 ppm/°C
CTE After T_g	: 203 ppm/°C
Thermal Conductivity @ 25°C	: 0.3 W/(mK)
Service Temperature Range	: -50°C to 140°C
Intermittent Temperature	: 200°C

Uncured Properties Without Colorants

Mixed Density		1.1 g/mL
Density	(A)	1.1 g/mL
	(B)	1.0 g/mL
Viscosity @ 25°C	(A)	2.5 Pa·s
	(B)	1.5Pa·s

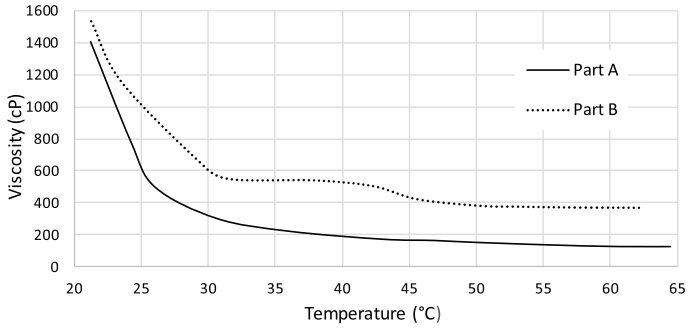
Syringe or Cartridge

1. Twist and remove the cap from the syringe or cartridge. Do not discard cap.
2. Dispense a small amount to ensure even flow of both parts.
3. (Optional) Attach a static mixer.
   a. Dispense and discard 5 to 10 mL of the product to ensure a homogeneous mixture.
   b. After use, dispose of static mixer.
4. Without a static mixer, dispense material on a mixing surface or container, and thoroughly mix parts A and B together.
5. To stop the flow, pull back on the plunger.
6. Clean nozzle to prevent contamination and material buildup.
7. Replace the cap on the syringe or cartridge.

Mixing

1. Scrape settled material free from the bottom and sides of the part A container; stir the contents until homogenous. Use a paint shaker if available.
2. Measure 1 part by volume of the part A and pour into the mixing container. Ensure all contents are transferred by scraping the container.
3. Measure 1 part by volume of the part B and pour into the mixing container. Ensure all contents are transferred by scraping the container.
4. Thoroughly and gently mix parts A and B together. Avoid introducing air bubbles.
5. To de-air, let sit for 15 minutes or put in a vacuum chamber at 25 inHg for 2 minutes.
6. If bubbles are present at the top, break them gently with the mixing paddle.
7. Pour the mixture into a container holding the components to be protected.
8. Close the part A and B containers tightly between uses to prevent skinning.

Viscosity vs. Temperature



Part Number Table

Description	Part Number
Epoxy potting Compound, Black, 25mL	MP014779