

## Surface Mount Adhesive

9310 is a 1-part, fast curing, electrically insulative epoxy adhesive. It is a smooth, thixotropic paste that stays in place without tailing when dispensed.

This surface mount adhesive is specially designed for die attach applications in electronics assembly operations. It can be readily used in manual, pneumatic and robotic dispensing processes. It can also be used as a general-purpose adhesive for household, industrial and manufacturing applications.

It has an unlimited working life at room temperature and does not require mixing or frozen storage.

## Features & Benefits

- Consistent dot profile
- No mixing, unlimited working time at room temperature
- Room temperature storage ( $\leq 22^{\circ}\text{C}$ )
- Strong adhesion to a variety of substrates
- Suitable for automated dispensing
- Fast curing

## Cure Instructions

The product will not cure at room temperature. Cure the adhesive in an oven at one of these time/temperature options:.

Temperature	100 °C	120 °C
Time	30 min	10 min

## Storage and Handling

Store between -10 and 27 °C in a dry area, away from sunlight (see SDS). To maximize shelf life, recap product firmly when not in use.



## Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
9310-10ML	Syringe	10 mL	11.4 g
9310-30ML	Cartridge	30 mL	34.4 g
9310-300ML	Cartridge	300 mL	344 g

## Dispensing Accessories

9310-300ML cartridges are compatible with caulking guns that are readily available for purchase at local hardware stores.

## Liquid Properties

Density	1.2 g/mL	ASTM D1475
Viscosity @ 25 °C	87 Pa·s	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Working Time	Unlimited	—
Shelf Life	2 y	—

## Cured Properties

Color	Translucent, pale yellow	—
Density	1.1 g/mL	Hydrostatic Weighing
Service Temperature Range	-55–140 °C	—
Breakdown Voltage	41 600 V	—
Dielectric Strength	220 V/mil	—
Resistivity	$9.3 \times 10^{12} \Omega \cdot \text{cm}$	ASTM D257
Hardness	84 D	ASTM D2240
Tensile Strength	9.4 N/mm <sup>2</sup>	ASTM D638
Compressive Strength	103 N/mm <sup>2</sup>	ASTM D695
Lap Shear	8.5 N/mm <sup>2</sup> (Stainless steel) 6.2 N/mm <sup>2</sup> (Aluminum)	ASTM D1002
Glass Transition Temperature ( $T_g$ )	113 °C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	56 ppm/°C (Prior $T_g$ ) 185 ppm/°C (After $T_g$ )	ASTM E831
Thermal Conductivity @ 25 °C	0.2 W/(m·K)	ASTM E1461
Specific Heat Capacity @ 25 °C	1.4 J/(g·K)	
Thermal Diffusivity @ 25 °C	0.2 mm <sup>2</sup> /s	

## Application Instructions

Read the product SDS for more detailed instructions before using this product.

## Recommended Preparation

Clean the substrate with Isopropyl Alcohol, MG #824, so the surface is free of oils, dust, and other residues.

## Syringe or Cartridge

1. For 10 mL size, twist and remove the cap from the syringe. Do not discard the cap.
2. For the 300 mL size, cut the end of the cartridge tip
  - a. Dispense and discard 3 to 5 mL of the product to ensure homogeneous mixture.
  - b. Insert the cartridge in a caulking gun.
3. Dispense the adhesive evenly to both surfaces.
4. To stop the flow, pull back on the plunger.
5. Clean nozzle to prevent contamination and material buildup.
6. Replace the cap on the cartridge or syringe.

**Disclaimer:** This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.