

# 832HDA



## Black 1:1 Epoxy UK/EU, Encapsulating & Potting Compound

832HDA 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.

832HDA 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 & 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

## Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
832HDA-25ML	Dual syringe	25 mL	26.4 g
832HDA-50ML	Dual cartridge	46 mL	48.7 g
832HDA-400ML	Dual cartridge	380 mL	402 g
832HDA-7.4L	2 Pail kit	7.4 L	7.83 kg
832HDA-40L	2 Pail kit	40 L	42.3 kg

## Dispensing Accessories

Part #	Dispensing Gun	Static Mixer
832HDA-25ML	N/A	8MT-25
832HDA-50ML	8DG-50-1-1	8MT-50
832HDA-400ML	8DG-400-1-1	8MT-450

## Cure Instructions

Allow to cure at room temperature for 24 hours, or cure in an oven at one of these time/temperature options:

Temperature	65 °C	80 °C	100 °C
Time	1 h	30 min	10 min

## Storage and Handling

Store between 16 and 27 °C in a dry area, away from sunlight (see SDS). Storage below 16 °C can result in crystallization.

## Liquid Properties

Chemistry	Epoxy	—
Density	1.1 g/mL (Mixed) 1.1 g/mL (A) 1.0 g/mL (B)	ASTM D1475
Viscosity @ 25 °C	2 100 cP (Mixed) 2 500 cP (A) 1 500 cP (B)	Brookfield Engineering labs Inc. IPCTM-65- Method 2.4.24.4
Mix Ratio	1:1 (Volume) 1.1:1 (Weight)	— —
Working Time <sup>a</sup>	45 min	—
Shrinkage	3.7%	Calculated
Shelf Life	5 y	—

<sup>a</sup>Based on 100 g sample. Varies by volume and geometry.

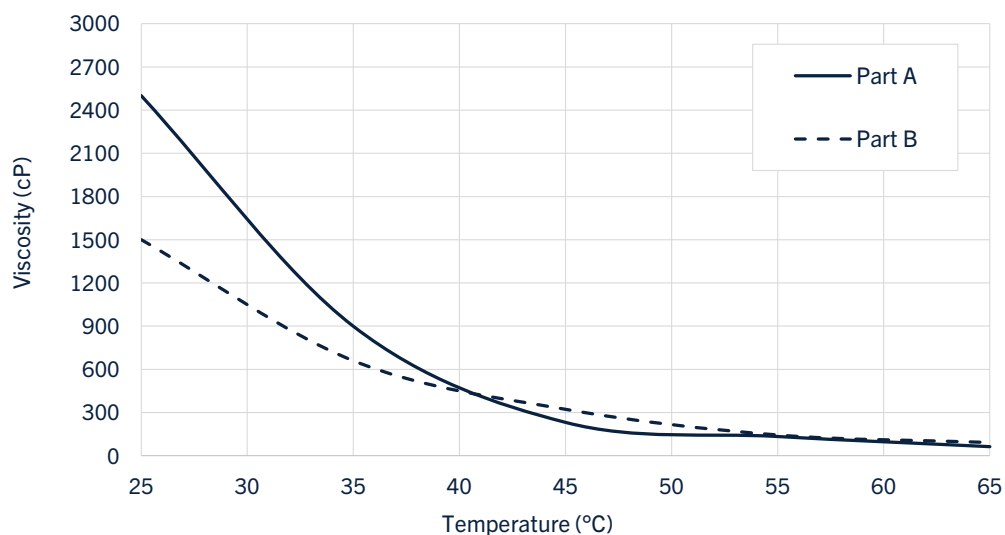
## Cured Properties

Flame Retardancy	No	—
Color	Black	—
Density	1.1 g/mL	Hydrostatic Weighing
Service Temperature Range	-50–140 °C	—
Intermittent Temperature	200 °C	—
Thermal Conductivity @ 25 °C	0.3 W/(m·K)	ASTM E1461
Specific Heat Capacity @ 25 °C	1.5 J/(g·K)	
Thermal Diffusivity @ 25 °C	0.1 mm <sup>2</sup> /s	
Glass Transition Temperature (T <sub>g</sub> )	51 °C	ASTM E1545
Coefficient of Thermal Expansion (CTE)	51 ppm/°C (Prior T <sub>g</sub> ) 203 ppm/°C (After T <sub>g</sub> )	ASTM E831
Hardness	80 D	ASTM D2240
Tensile Strength	27 N/mm <sup>2</sup>	ASTM D638
Compressive Strength	96 N/mm <sup>2</sup>	ASTM D695

## Cured Properties Continued

Lap Shear	7.3 N/mm <sup>2</sup> (Stainless Steel) 7.8 N/mm <sup>2</sup> (Aluminum) 2.6 N/mm <sup>2</sup> (ABS) 1.9 N/mm <sup>2</sup> (PC)	ASTM D1002
Resistivity	$3.8 \times 10^{12} \Omega\text{-cm}$	ASTM D257
Breakdown Voltage @ 3.175 mm Dielectric Strength @ 3.175 mm	45 160 V 348 V/mil	ASTM D149
Dielectric Constant @ 1 MHz Dissipation Factor @ 1 MHz	2.5 0.04	ASTM D150

## Viscosity vs Temperature



## Application Instructions

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

## Recommended Preparation

Clean the substrate with 824 99.9% Isopropyl Alcohol, so the surface is free of oils, dust, and other residues.

## 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 parts 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.

## 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 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. Replace the cap on the cartridge.

If crystallization/solidification occurs, reconstitute the product by warming to between 55 and 65 °C until it becomes fully re-liquified. Let the material cool to room temperature before mixing, to prevent flash cure.

Mixing >500 g at a time decreases working time and can lead to a flash cure. Limit the size of hand-mixed batches. For large production volumes, contact MG Chemicals Technical Support for assistance.

**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.