Loctite 9460

Loctite 9460 Hysol Epoxy Structural Adhesive Instruction Manual

Model: 9460 (Part No. 83129)

1. Product Overview

LOCTITE® EA 9460 is a gray, two-part, thixotropic modified epoxy adhesive designed for ease of use and a balanced set of properties. This product offers high peel strength and excellent shear strength, making it suitable for demanding applications. Its flexibility allows for effective bonding of dissimilar materials and various substrates.

Recommended substrates include metals, engineering thermoplastics, and thermoset laminates such as sheet molding compound (SMC).

- **Key Features:**
- Non-sag slump resistance for vertical or overhead applications.
- High peel strength and excellent shear strength.
- Flexibility for bonding diverse materials.
- Temperature resistance up to 250°F (121°C).

2. Safety Information

WARNING: MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION. Read side panel for additional precautions.

Always handle this product in a well-ventilated area. Wear appropriate personal protective equipment, including safety glasses with side shields, chemical-resistant gloves (e.g., nitrile or butyl rubber), and protective clothing. Avoid contact with skin and eyes. In case of contact, flush immediately with plenty of water and seek medical attention if irritation persists. Keep out of reach of children.

3. Product Specifications

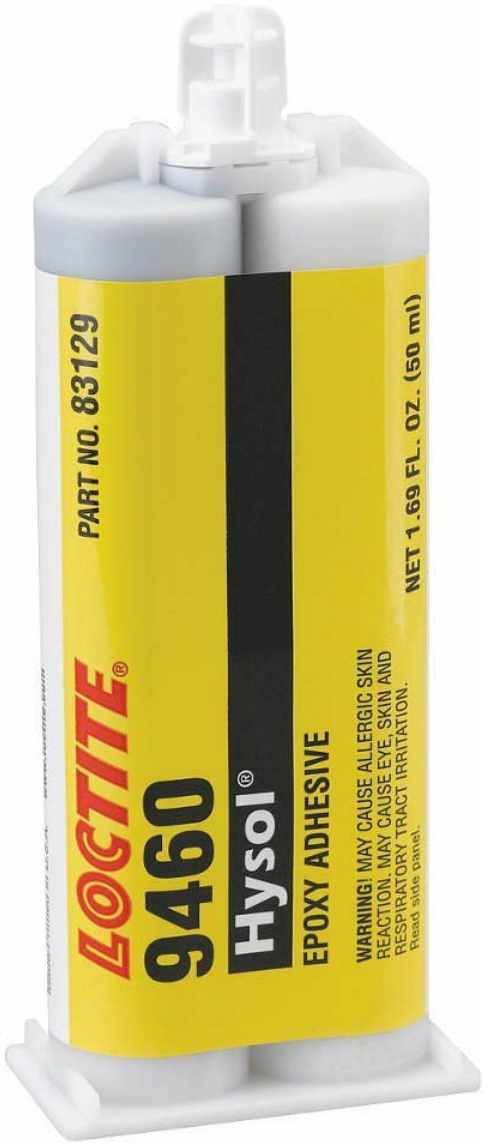

Image showing the Loctite 9460 Hysol Epoxy Structural Adhesive in its gray dual cartridge packaging. The label clearly displays 'LOCTITE 9460 Hysol® EPOXY ADHESIVE' and 'PART NO. 83129', with a net content of 1.69 FL. OZ. (50 ml).

Specification	Detail
Product Name	Loctite 9460 Hysol Epoxy Structural Adhesive
Model Number	9460 (Part No. 83129)
Color	Gray
Form	Liquid (2-part epoxy)
Material	Epoxy Resin
Net Content	50 mL (1.69 FL. OZ.)
Application Time	50 minutes
Curing Time	24 hours (full cure)
Temperature Range	Up to 250°F (121°C)

Product Dimensions	1 x 1.8 x 4.6 inches
Product Weight	2.82 ounces

4. Setup and Preparation

4.1 Surface Preparation

For optimal adhesion, surfaces must be clean, dry, and free from oil, grease, dust, and other contaminants. Abrading surfaces with sandpaper or a wire brush, followed by a solvent wipe (e.g., isopropyl alcohol), can improve bond strength. Ensure surfaces are completely dry before adhesive application.

4.2 Dispensing and Mixing

Loctite 9460 is supplied in a dual cartridge system. It requires a specialized dispensing gun and static mixing nozzle for proper application. These accessories are typically sold separately.

1. Attach a static mixing nozzle to the dual cartridge.
2. Insert the cartridge into the appropriate dispensing gun.
3. Dispense a small amount of adhesive (approximately 1-2 inches) onto a disposable surface to ensure both components are flowing evenly and properly mixed through the nozzle. Discard this initial bead.

4.3 Environmental Conditions

Apply the adhesive at room temperature (68-77°F / 20-25°C) for best results. Lower temperatures will increase cure time, while higher temperatures will decrease it.

5. Operating Instructions (Application)

Once the cartridge is prepared with a mixing nozzle and dispensing gun, apply the mixed adhesive directly to one of the prepared surfaces. The working time (application time) for Loctite 9460 is approximately 50 minutes at room temperature.

- Apply a sufficient amount of adhesive to cover the bonding area.
- Bring the two surfaces together within the 50-minute application time.
- Ensure proper alignment and apply light clamping pressure if necessary to maintain contact during the initial cure phase. Avoid excessive pressure that could squeeze out too much adhesive.
- The non-sag property of this adhesive helps maintain its position on vertical or overhead surfaces during application.

6. Curing and Post-Application

Loctite 9460 achieves handling strength within a few hours, but a full cure typically takes 24 hours at room temperature (68-77°F / 20-25°C).

- Do not disturb or stress the bonded assembly during the curing period.
- Allow the full 24 hours for the adhesive to reach its maximum strength and chemical resistance.
- The cured adhesive can withstand temperatures up to 250°F (121°C).

7. Maintenance and Storage

7.1 Storage

Store unused Loctite 9460 cartridges in a cool, dry place, ideally between 46°F and 82°F (8°C and 28°C),

away from direct sunlight and heat sources. Ensure the cartridge is sealed properly to prevent contamination and premature curing of the components.

7.2 Cleaning

Clean tools and equipment with a suitable solvent (e.g., acetone or isopropyl alcohol) immediately after use, before the adhesive cures. Cured epoxy is very difficult to remove and may require mechanical abrasion.

8. Troubleshooting

- **Poor Adhesion:** Ensure surfaces were properly cleaned and prepared. Verify that the adhesive components were thoroughly mixed (if not using a static mixer, or if the initial bead was not purged).
- **Slow or Incomplete Cure:** Check ambient temperature; lower temperatures significantly extend cure times. Ensure proper mixing ratio if not using a static mixer.
- **Adhesive Sagging:** While Loctite 9460 is non-sag, excessive application thickness or very high temperatures during cure could potentially affect its thixotropic properties.

If issues persist, review the instructions carefully or contact Loctite technical support for assistance.

9. Warranty and Support

For specific warranty information or technical support regarding Loctite 9460 Hysol Epoxy Structural Adhesive, please refer to the official Loctite website or contact their customer service directly. Product performance can be affected by application methods and environmental conditions, so adherence to these instructions is crucial.

Manufacturer: Rudolph Bros. & Co. (for Loctite)