Loctite AA457

Loctite 620 Retaining Compound Instruction Manual

Model: AA457 | Part Number: 62015

1. Introduction

The Loctite 620 Retaining Compound is a high-strength, high-temperature anaerobic adhesive designed for bonding cylindrical fitting parts. This product is formulated to lock and secure metal cylindrical assemblies, prevent metal fretting and corrosion, and seal against leakage. It is suitable for applications requiring high temperature resistance and robust bonding.

2. Product Overview

Image: Loctite 620 Retaining Compound in a 10 mL bottle. This green-colored adhesive is used for securing cylindrical metal parts.

Loctite 620 is a high-viscosity liquid retaining compound. Key characteristics include:

- **Color:** Green
- **Gap Fill:** Up to 0.015 inches (0.38 mm) maximum
- **Viscosity:** 8500.0 cP
- **Shear Strength:** 3800 psi
- **Temperature Range:** -65.0°F (-54°C) to 450.0°F (232°C)
- **Chemical Compound:** Acrylic Ester
- **Curing Method:** Anaerobic (cures in the absence of air when confined between close-fitting metal surfaces)
- **Applications:** Cylindrical joint assemblies

- **Applicable Materials:** Steel, Most Metals
- **Odor:** Mild
- **Resistance:** Acetone, Brake Fluid, Corrosive Process, Heat, Unleaded Petrol, Wear
- **Packing Type:** Bottle
- **Volume:** 10 mL

3. Safety Information

Always prioritize safety when handling chemical products. Consult the Material Safety Data Sheet (MSDS) for comprehensive safety information before use. The MSDS for Loctite 620 Retaining Compound (e.g., 62015 Retaining Compound Slip Fit 620.pdf) provides detailed guidance on safe handling, storage, and emergency procedures.

- **Personal Protective Equipment:** Wear appropriate gloves and eye protection (safety glasses or goggles) to prevent skin and eye contact.
- **Ventilation:** Use in a well-ventilated area to avoid inhalation of vapors.
- **Storage:** Store in a cool, dry place, away from direct sunlight and incompatible materials. Keep container tightly closed when not in use.
- **First Aid:** In case of contact, refer to the MSDS for specific first aid measures.
- **Disposal:** Dispose of product and packaging in accordance with local, regional, national, and international regulations.
- **Keep Out of Reach:** Keep out of reach of children and pets.

4. Setup and Surface Preparation

Proper surface preparation is critical for optimal performance of the retaining compound.

1. **Clean Surfaces:** Thoroughly clean all mating surfaces to remove any oil, grease, dirt, or other contaminants. Use a suitable industrial cleaner or degreaser.
2. **Dry Surfaces:** Ensure all surfaces are completely dry before applying the compound. Moisture can interfere with the curing process.
3. **Roughening (Optional):** For maximum adhesion on passive metals or large gaps, light abrasion of the surfaces may be beneficial, followed by cleaning.

5. Operating Instructions (Application)

Follow these steps for effective application of Loctite 620 Retaining Compound:

1. **Dispense Compound:** Apply a sufficient amount of Loctite 620 Retaining Compound to one or both mating surfaces of the cylindrical assembly. Ensure complete coverage of the bond area.
2. **Assemble Parts:** Quickly assemble the parts. The anaerobic curing process begins when the compound is confined between the metal surfaces in the absence of air.
3. **Curing Time:**
    - **Fix Cure Time:** Approximately 30 hours at 77°F (25°C). This is the time required for the assembly to achieve sufficient handling strength.
    - **Full Cure Time:** Approximately 24 hours at 77°F (25°C). This is the time required for the product to achieve its maximum strength. Note: Cure times can vary depending on temperature, gap, and substrate material.
4. **Post-Assembly:** Avoid disturbing the assembly during the initial fix cure period to ensure proper bonding.

6. Maintenance and Storage

Proper storage ensures the longevity and effectiveness of the product.

- **Storage Conditions:** Store the Loctite 620 Retaining Compound in its original container in a cool, dry, and well-ventilated area. Ideal storage temperature is between 46°F (8°C) and 82°F (28°C).
- **Container Sealing:** Keep the bottle tightly closed when not in use to prevent air exposure, which can initiate curing.
- **Shelf Life:** Refer to the product packaging or technical data sheet for specific shelf life information.

7. Troubleshooting

If you encounter issues during application or curing, consider the following:

- **No Cure or Slow Cure:**
  - **Surface Cleanliness:** Ensure surfaces were thoroughly cleaned and degreased. Contaminants can inhibit curing.
  - **Anaerobic Conditions:** Verify that the compound is fully confined between metal surfaces with minimal air exposure. Anaerobic adhesives require the absence of air to cure.
  - **Temperature:** Curing speed is temperature-dependent. Lower temperatures will result in slower cure times. Ensure application is within recommended temperature ranges.
  - **Substrate Material:** Some metals (e.g., stainless steel, zinc, aluminum) are less active and may cure slower. An activator may be required for passive substrates or large gaps, though not explicitly mentioned for this product, it's a general anaerobic adhesive troubleshooting step.
- **Poor Adhesion:**
  - **Gap Size:** Ensure the gap between parts is within the specified 0.015-inch maximum. Excessive gaps can lead to incomplete curing and poor strength.
  - **Surface Preparation:** Re-evaluate surface cleaning and drying procedures.

8. Specifications

Manufacturer	Loctite
Part Number	62015
Item Model Number	AA457
Item Weight	0.96 ounces
Package Dimensions	21 x 18 x 18 inches
Color	Green
Style	Compact
Material	Acrylic
Item Package Quantity	1
Special Features	Heavy Duty, Industrial Strength
Usage	Metal, Cylindrical Joint

Batteries Required?	No
Date First Available	October 5, 2016

9. Warranty Information

Specific warranty details for the Loctite 620 Retaining Compound are not provided within this manual. For information regarding product warranty, please contact Loctite customer support or refer to the official Loctite website.

10. Support and Contact

For further assistance, technical data sheets, or safety information, please refer to the official Loctite resources.

- **Official Loctite Store:** Visit the Loctite Store on Amazon
- **Material Safety Data Sheets (MSDS):** Always consult the latest MSDS for detailed safety and handling instructions.
- **Technical Support:** Contact Loctite directly for product-specific technical support.