



TECHNICAL DATA SHEET

LOCTITE® EPOXY METAL/CONCRETE

Henkel Corporation
Professional and Consumer Adhesives
Rocky Hill, CT 06067
Phone 1-800-624-7767
Fax (440) 250-7863
www.henkel.com www.loctiteproducts.com



Item #	Package	Size
1405605	Carded Syringe	0.85 fl. oz.

DESCRIPTION:

Loctite® Epoxy Metal/Concrete is a two-part system consisting of an epoxy resin and a hardener. The convenient syringe dispenses equal amounts of each component every time. When mixed in equal volumes, resin and hardener react to produce a tough, rigid, high strength bond in 5 to 12 minutes. It is used as an adhesive for repairing, filling and rebuilding all metal and concrete surfaces. Loctite® Epoxy Metal/Concrete does not conduct electricity which is ideal for sealing electrical components. It cures to a metallic gray finish and can be easily sanded or machined. It does not shrink and is resistant to water and most common solvents.

RECOMMENDED FOR:

Bonding metal and concrete as well as glass, ceramic and wood. Use for repairing machinery, appliances, tools, lawnmowers, automotive components, pipes, imbedding bolts and screws into metals, concrete or stone and sealing electrical components against moisture and vibration.

NOT RECOMMENDED FOR:

- Polyethylene, polypropylene, nylon, polytetrafluoroethylene (PTFE)/Teflon® or flexible materials
- Applying at temperatures below 39°F (4°C) and above 95°F (35°C)
- Continuously wet areas or water immersion

FEATURES & BENEFITS:

Feature	Benefits
Machinable.....	Will not crack when drilled
Water resistant.....	Great for interior or exterior projects
Will not shrink.....	One-time application
Convenient syringe.....	Dispenses equal amounts of each component every time
Will not conduct electricity.....	Can be used for sealing electrical components
Sets in 5 to 12 minutes.....	Quick completion of project

DIRECTIONS:

Tools Typically Required:

Utility knife, mixing tool/applicator (e.g. small flat plastic or wooden stick), disposable surface (e.g. foil, paper).

Safety Precautions:

Apply and cure in a well ventilated area. Wear gloves and wash hands after use.

Preparation:

Surfaces must be clean, dry and free from oil, wax and paint. Roughen smooth surfaces for better adhesion by sandblasting or sanding with an emery cloth. Wash glass and ceramic surfaces with soap and water then rinse and let dry. Pre-fit parts to be joined. Remove the plug from between the piston. Cut off the end tips of the syringe. Turn syringe end up and pull plunger back slightly allowing air bubbles to rise to top. Depress the double piston to dispense equal parts of the two materials on a disposable surface. Mix resin and hardener thoroughly until uniform in colour. Wipe syringe tips clean, retract piston slightly and close with the plug. Ensure that the plug is always placed in the same orientation on the tips.

Application:

Apply a small amount to both surfaces, join and press together. Remove any excess glue immediately with acetone. Support until bond sets in 5 to 12 minutes at room temperature. For best results, clamp or secure as required for 1 hour. Usable strength in 12 hours. Full cure and strength in 24 hours. Moderate heat will speed hardening while cooler temperatures will require a longer set time.

Clean-up:

Clean excess glue immediately with acetone before adhesive sets. Cured adhesive may be cut away with caution using a sharp blade. Prolonged immersion in paint stripper will soften the cured adhesive to aid removal. Use an approved hazardous waste facility for disposal.

STORAGE AND DISPOSAL

Not damaged by freezing. If frozen, warm to room temperature until the resin and hardener become liquid enough to mix. Use an approved hazardous waste facility for disposal.

PRECAUTIONS

MAY IRRITATE EYES AND SKIN. Do not get in eyes or on skin. May cause allergic skin reaction. **KEEP OUT OF REACH OF CHILDREN. FIRST AID TREATMENT:** Contains diethylenetriamine. If swallowed, call Poison Control Centre or doctor immediately. Do not induce vomiting. If in eyes rinse well with water for at least 15 minutes. If on skin, rinse well with water.

Refer to the Material Safety Data Sheet (MSDS) for further information

DISCLAIMER

The information and recommendations contained herein are based on our research and are believed to be accurate, but no warranty, express or implied, is made or should be inferred. Purchasers should test the products to determine acceptable quality and suitability for their own intended use. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

TECHNICAL DATA

Typical Uncured Physical Properties		Typical Application Properties	
<u>Color:</u>		<u>Application Temperature:</u>	39°F (4°C) to 95°F (35°C)
Hardener:	Off-White	<u>Odor:</u>	Amine
Resin:	Metallic Gray	<u>Gel Time:</u>	5 to 12 minutes
<u>Base:</u>	Polymercaptan Hardener / Epoxy Resin	(2g : 2g)	
<u>Specific Gravity:</u>		<u>Usable Strength:</u>	12 hours
Hardener:	1.60	<u>Full Cure Time:</u>	24 hours
Resin:	1.63		
<u>Flash Point:</u>			
Hardener:	> 200°F (93°C)		Cure time is dependent upon temperature, humidity and the amount of product used.
Resin:	> 250°F (96°C)		
<u>VOC Content:</u>	0.04 %wt		
(Resin + Hardener)			
<u>Shelf Life:</u>	18 months from date of manufacture (Unopened)		
<u>Lot Code Explanation:</u>	For Example:		
	L36FAC569		
(Lot code stamped on back of syringe label along the seam.)	6 = Last Digit in the Year of Manufacture 6 = 2006 (i.e. 7 = 2007, 8 = 2008, 9 = 2009, etc)	A – January B – February C – March D – April E – May F – June	G – July H – August J – September (there is no I) K – October L – November M – December
	F = Month within Year of Manufacture F = 6 th Letter of Alphabet F = June (i.e. A = Jan, B = Feb, C = March, etc)		

Typical Cured Performance Properties

<u>Color:</u>	Opaque, Medium Gray
<u>Service Temperature:</u>	
Long Term Exposure:	-23°C (-9°F) to 49°C (120°F)
Short Term Exposure:	-23°C (-9°F) to 150°C (302°F)
<u>Water Resistant:</u>	Yes
<u>Sandable:</u>	Yes
<u>Paintable:</u>	No
<u>Hardness, Shore D:</u> (7 days)	80 ± 2
<u>Tensile Shear Strength:</u>	
Sandblasted Cold Rolled Steel:	
1 hour:	1016 ± 142 psi (7.00 ± 0.98 N/mm ²)
4 hours:	2447 ± 7 psi (16.82 ± 0.05 N/mm ²)
24 hours:	3192 ± 94 psi (22.01 ± 0.65 N/mm ²)
Sandblasted Aluminum, 24 hours:	2395 ± 82 psi (16.51 ± 0.57 N/mm ²)
<u>Compressive Shear Strength:</u>	
Sanded Hard PVC (White), 24 hours:	911 ± 94 psi (6.28 ± 0.65 N/mm ²)
Sanded Acrylite FF, 24 hours:	1657 ± 189 psi (11.42 ± 1.30 N/mm ²)
Maple, 24 hours:	2285 ± 90 psi (15.75 ± 0.62 N/mm ²)
<u>Water Resistance – Tensile Shear Strength::</u> (Aluminum to Aluminum, 7 day cure)	
24 hour Water Immersion:	2264 ± 59 psi (15.61 ± 0.41 N/mm ²)
8 day Water Immersion:	2334 ± 131 psi (16.09 ± 0.90 N/mm ²)
<u>Solvent Resistance – Tensile Shear Strength:</u> (Aluminum, 7 day Cure, 24 hour Immersion)	
Gasoline	3158 ± 162 psi (21.77 ± 1.12 N/mm ²)
10W30 Oil	3257 ± 115 psi (22.46 ± 0.79 N/mm ²)
Anti-Freeze	3253 ± 142 psi (22.43 ± 0.98 N/mm ²)
<u>Side impact Resistance:</u> (Sandblasted Cold Rolled Steel, 1"x1", 7 days)	3.3 Joules