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3461 Steel Liquid

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PRODUCT DESCRIPTION

Loctite 3461 Steel Liquid is a two-part steel filled pourable epoxy repair material, it has high compressive strength, and can be machined, drilled etc. Temperature range -30° to $+105^{\circ}\text{C}$.

Advantages:

- Self levelling liquid
- For -repairs and casting

TYPICAL APPLICATIONS

- Rebuilds worn parts
- Repairing non structural defects in castings
- Casting prototypes, jigs/fixtures etc
- High steel content - cures to a steel-like finish.
- Excellent adhesion – forms a permanent bond

PROPERTIES OF UNCURED MIXED MATERIAL

Mixture	Typical Value
Appearance	Metallic Grey
Mix Ratio (R:H) by Volume	4:1
by Weight	9.5:1
Coverage	470 cm ³ per 1 kg. kit 29 in ³ per 1 kg. Kit

TYPICAL CURING PERFORMANCE

Curing Properties

(@ 25°C unless noted)

Working Life, minutes

Cure Time, hours

Typical Value

25

6

TYPICAL PROPERTIES OF CURED MATERIAL

(@ 25°C unless noted)

Physical Properties

	Typical Value
Compressive Strength, ASTM D695, N/mm ²	93.1
Shear Strength ASTM D1002, N/mm ²	13.1
.125 mm gap, acid etched aluminium	
Tensile Strength, ASTM D638, N/mm ²	41.4
Hardness ASTM D-2240, Shore D	86

DIRECTIONS FOR USE

- Thoroughly clean and abrade surfaces (grit blast if possible), finally clean with Loctite 7063. (Note - a mould release should be used on surfaces where adhesion is not desired).
- Mix 4 parts resin to 1 part hardener by volume, (9.5 to 1 by weight), or mix entire kit by adding hardener contents to resin container.
- Mix thoroughly until a uniform colour is obtained. Being sure to mix along the sides and bottom.
- Initially apply as a thin film, build up to desired thickness, or pour mixed material into desired area.

TECHNICAL TIPS FOR WORKING WITH EPOXIES

Working time and cure time depends on temperature and mass:

- The higher the temperature, the faster the cure.
- The larger the mass of material, the faster the cure.

To speed the cure of epoxies at low temperatures:

- Store epoxy at room temperature.
- Pre-heat repair surface until warm to the touch.

To slow the cure of epoxies at high temperatures:

- Mix epoxy in small masses to prevent rapid curing.
- Cool resin/hardener components.

GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

Storage

Product shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8°C to 28°C unless otherwise labelled. Optimal storage is at the lower half of this temperature range. To prevent contamination of unused product, do not return any material to its original container. For further specific shelf life information, contact Loctite UK Technical Service.

Data Ranges

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Note

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NOT FOR PRODUCT SPECIFICATIONS.

THE TECHNICAL DATA CONTAINED HEREIN ARE INTENDED AS REFERENCE ONLY.

PLEASE CONTACT LOCTITE CORPORATION QUALITY DEPARTMENT FOR ASSISTANCE AND RECOMMENDATIONS ON SPECIFICATIONS FOR THIS PRODUCT.

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