

LOCTITE[®] EA 3488[™]

High Temperature Superior Metal

November 2016

PRODUCT DESCRIPTION

LOCTITE[®] EA 3488[™]

High Temperature Superior Metal provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Dark gray
Appearance (Hardener)	Light gray
Appearance (Mixture)	Metallic gray
Components	Two components - requires mixing
Mix Ratio, by volume - Resin : Hardener	11 : 3
Mix Ratio, by weight - Resin : Hardener	10 : 3
Application	Industrial maintenance
Cure	Heat cure
Specific Benefit	• High ferro-silicon content • Resists corrosion, abrasion, and chemicals • Rebuilds worn parts fast - limits downtime • Superior adhesion - forms a solid bond • Long lasting • High compression resistance at elevated temperatures

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High Temperature Superior Metal is a two-part ferro-silicon filled epoxy resin system. It is extremely resistant to corrosion, chemical attack, and abrasion under typical dry service temperatures of -30°C to 150°C. It is ideal for restoring parts worn by mechanical and/or corrosion impact. Typical applications are restoring tolerances to worn shafts, repairing worn keyways, repairing damaged housings, filling pitted surfaces in worn machinery, and restoring fit to bearing housings.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A:

Specific Gravity @ 25 °C	2.1
Viscosity, Cone & Plate, :	
Viscosity @ 25°C, mPa·s (cP)	250,000

Part B:

Specific Gravity @ 25 °C	2.3
Viscosity, Cone & Plate, :	
Viscosity @ 25°C, mPa·s (cP)	20,000

TYPICAL CURING PERFORMANCE

Curing Properties

Working Time @ 25 °C, minutes	30
Fixture time @ 25 °C, hours	16
Post Cure: 16 hours @ 25°C + 3 hours @ 90°C or 3 hours @ 90°C	

TYPICAL PROPERTIES OF CURED MATERIAL

Cured for 16 hours @ 25 °C + 3 hours @ 90 °C

Glass Transition Temperature (Tg) by DSC, ASTM D 1640, °C	143
Shore Hardness, ISO 868, Durometer D	90
Compressive Strength@ 130°C, ISO 604	N/mm ² 58 (psi) (8,410)

TYPICAL PERFORMANCE OF CURED MATERIAL

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 Safety Data Sheet (SDS).

Directions for use:

1. Clean and dry surface of application. Grind or sandblast surface for best adhesion. Material works best on rough surface.
2. Mix 10 part resin to 3 part hardener by weight (11 to 3 by volume) or transfer entire kit onto a clean and dry mixing surface and mix material vigorously until a uniform color is obtained.
3. Apply fully mixed material to prepared surface.
4. At 25°C, the working time is 30 minutes and the heat curing cycle can be carried out directly or after a room temperature cure to handling strength.
5. If you heat-cure directly after application make sure moderate heating rates are used (max. 2C/min).

Technical Tips for Working With Epoxies

Working time and cure 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.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$
 $\text{kV/mm} \times 25.4 = \text{V/mil}$
 $\text{mm} / 25.4 = \text{inches}$
 $\mu\text{m} / 25.4 = \text{mil}$
 $\text{N} \times 0.225 = \text{lb}$
 $\text{N/mm} \times 5.71 = \text{lb/in}$
 $\text{N/mm}^2 \times 145 = \text{psi}$
 $\text{MPa} \times 145 = \text{psi}$
 $\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$
 $\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$
 $\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$
 $\text{mPa}\cdot\text{s} = \text{cP}$

Storage

Store product in the unopened container in a dry location. Material removed from containers may be contaminated during use. Do not return liquid to original container. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Henkel cannot assume responsibility for product which has been contaminated or stored under conditions other than those recommended. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Note:

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