



LOCTITE® Nordbak® Backing Material

September 2011

PRODUCT DESCRIPTION

LOCTITE® Nordbak® Backing Material provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Light beige liquid ^{LMS}
Appearance (Hardener)	Blue translucent liquid ^{LMS}
Appearance (Mixture)	Bluish green to dark grey ^{LMS}
Components	Two component - requires mixing
Mix Ratio, by volume - Resin : Hardener	8.55 : 1
Mix Ratio, by weight - Resin : Hardener	100 : 6.5
Cure	Room temperature cure
Application	Crusher repair products

LOCTITE® Nordbak® Backing Material is the original 100 % solids epoxy system for backing wear metal in crushers and grinding mills. The product needs no melting or special equipment and has high volumetric stability that eliminates formation of gaps between backing and liners or support structures. It is easy and safe to use.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin:

Weight Per Gallon, lbs/gal	14.7 to 15.2
Viscosity, Brookfield - RV, 25 °C, mPa·s (cP):	
Spindle 6, speed 20 rpm	20,000 to 38,000 ^{LMS}

Hardener:

Specific Gravity @ 25 °C	0.97 to 1.02 ^{LMS}
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Mixed:

Coverage	5,576 cm³ per 7.5 liter kit (340 in³ per 2 gallon kit)
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TYPICAL CURING PERFORMANCE

Curing Properties

Gel Time @ 25 °C, minutes:	
400 g mass	14 to 22 ^{LMS}
Working Time @ 25 °C, minutes	10
Cure Time @ 25 °C, hours	8

TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 25 °C

Physical Properties:

Shore Hardness, ISO 868, Durometer D	90
Compressive Strength, ISO 604	N/mm² 106.9 (psi) (15,500)

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).

Directions for use:

Preparation of Metallic Parts

1. All metallic parts that come in contact with LOCTITE® Nordbak® Backing Material should be free of rust, dirt, grease and oil. Seal hook holes and bottom joints, and protect threaded parts of shafts where necessary. To facilitate easier removal of worn liners, coat crusher heads and mill shells with grease.

Preparation of Backing Material

1. LOCTITE® Nordbak® Backing Material must be at 15 °C to 26 °C before use. Lower temperatures give longer working life, but higher viscosity (harder to pour), while higher temperatures reduces working time to pour into crusher.

Mixing:

1. Pre-mix resin approximately 1 minute.
2. Shake hardener thoroughly mixing its contents.
3. While mixing resin, add hardener contents.

Application Method:

1. Pour mixture immediately after mixing. Pour at one place and allow LOCTITE® Nordbak® Backing Material to fill the cavity and push out the air in front of it. Use dam (tin, cardboard, clay, etc.) to direct the flow when necessary. Unmixed resin (different color clinging to the sides and bottom) should not be drained into the crusher.
2. Succeeding kits may be mixed and poured individually as needed. LOCTITE® Nordbak® Backing Material adheres to itself.

Caution: Use an approved, positive-pressure, supplied air respirator when welding or torch cutting near cured compound. **Do Not** use open flame on compound.



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.
- Cool resin/hardener component(s).

Loctite Material Specification^{LMS}

LMS dated January 23, 2002 (Resin) and LMS dated June 13, 2001 (Hardener). Test reports for each batch are available for the indicated properties. LMS test reports include selected QC test parameters considered appropriate to specifications for customer use. Additionally, comprehensive controls are in place to assure product quality and consistency. Special customer specification requirements may be coordinated through Henkel Loctite Quality.

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.

Conversions

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

Note

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Reference 1.3