

LOCTITE® Nordbak® Ceramic Tile Adhesive

August 2014

PRODUCT DESCRIPTION

LOCTITE® Nordbak® Ceramic Tile Adhesive provides the following product characteristics:

Technology	Epoxy
Chemical Type	Epoxy
Appearance (Resin)	Off-white ^{LMS}
Appearance (Hardener)	Off-white ^{LMS}
Appearance (Mixture)	White to grayish paste
Components	Two component - requires mixing
Mix Ratio, by volume - Resin : Hardener	1 : 1
Mix Ratio, by weight - Resin : Hardener	1 : 1.25
Cure	Room temperature cure
Application	Bonding
Specific Application	- Bonding ceramic tiles - Pact holes in pressure systems - Secure vertical anchor bolts - General purpose bonding
Specific Benefit	- Non-sag paste - allows application versatility for overhead and vertical surfaces - Easy to mix and use - Will not break or chip - withstands shock and impact - Adheres to most clean surfaces - versatile

LOCTITE® Nordbak® Ceramic Tile Adhesive is a high strength epoxy for installing ceramic tiles quickly and securely. This two-component material is suitable for both horizontal and vertical applications and has excellent shock and impact resistance under typical dry service temperatures -29 °C to +93 °C.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Resin:

Weight Per Gallon, lbs/gal 12.1 to 12.9^{LMS}
 Viscosity, Brookfield - RV, 25 °C, mPa·s (cP):
 Spindle TF, speed 2.5 rpm, 1,800,000 to 2,700,000^{LMS}

Hardener:

Weight Per Gallon, lbs/gal 15.2 to 16.0^{LMS}

Mixed:

Coverage 1.6 m² @ 0.32 cm thick/9.1 kg
 (20 ft² @ 0.125 in thick/20 lb)

TYPICAL CURING PERFORMANCE

Curing Properties

Gel Time @ 70 °C, minutes: 12 to 22^{LMS}
 100 g mass
 Cure Time @ 25 °C, hours 12
 Working Time @ 25 °C, minutes 60

TYPICAL PROPERTIES OF CURED MATERIAL

Cured @ 25 °C

Physical Properties:

Shore Hardness, ISO 868, Durometer D 88
 Compressive Strength, ISO 604 N/mm² 96.6
 (psi) (14,000)

TYPICAL PERFORMANCE OF CURED MATERIAL

Adhesive Properties

Cured @ 25 °C

Lap Shear Strength, ISO 4587:
 Aluminum (acid etched):
 0.125 mm gap N/mm² 34.5
 (psi) (5,000)

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:

Surface Preparation:

1. Success with this material depends on proper bond to substrate. Surfaces to be bonded MUST be free of oil, dirt, rust, paint, and MUST be above 10 °C for the adhesive to harden properly. Gritblast or grind surfaces to be bonded.

Mixing:

1. Measure 1 part resin to 1 part hardener by volume or weight, transfer entire kit onto a clean and dry mixing surface and mix together until uniform in color.
2. If resin and hardener temperatures are 15 °C or below, preheat resin only to about 32 °C but not to exceed 38 °C.
3. Apply adhesive to both surfaces and immediately press in place to push out air.

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 July 2, 2002 (Resin) and LMS dated July 2, 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.

Conversions

(°C x 1.8) + 32 = °F
 kV/mm x 25.4 = V/mil
 mm / 25.4 = inches
 µm / 25.4 = mil
 N x 0.225 = lb
 N/mm x 5.71 = lb/in
 N/mm² x 145 = psi
 MPa x 145 = psi
 N·m x 8.851 = lb·in
 N·m x 0.738 = lb·ft
 N·mm x 0.142 = oz·in
 mPa·s = 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:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage

Except as otherwise noted, all trademarks in this document are trademarks of Henkel Corporation in the U.S. and elsewhere. ® denotes a trademark registered in the U.S. Patent and Trademark Office.

Reference 1.3