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Product Description Sheet

Speedbonder® Product H8000

Industrial Products, May 2002

Description

Loctite® Speedbonder H8000 is a non-sag, two component, room temperature curing, 10:1 mix ratio, methacrylate adhesive system. H8000 is designed to have fast fixture time and excellent bond strength on multiple substrates including metals and composites. The product also has high elongation and excellent cold temperature impact strength. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures.

Recommended Substrates: Steel, Aluminum, Stainless Steel, FRP, Xenoy, RTM, Gelcoat, and ABS.

Features

- Non-sagging gaps filled to 1/2 inch
- Superior impact and peel strength
- Little or no surface preparation
- Offers excellent tolerance to off-ratio mixing
- Rapid room temperature cure
- 100% reactive
- Excellent environmental resistance

| Side Impact Strength, kJ/m ² , GM9751P test | Typical value | |
|--|---------------|--------|
| | @70°F | @-40°F |
| Aluminum | >42 | >42 |
| FRP | >15 | 16 |
| Ground Steel | 24 | 30 |

| T-Peel, pli, ASTM D1876 | Typical Value |
|-------------------------|---------------|
| Steel | 35 to 45 |
| Aluminum | 50 to 60 |

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).

Handling and Application

Mixing: It is highly recommended that either meter mix equipment or cartridges with static mix nozzles be used to properly ratio and dispense the adhesive. For optimum mixing, the Loctite static mixer, Item 985545 is recommended. Once mixed, H8000 should achieve a uniform green color. Heat buildup during and after mixing is normal. To reduce the likelihood of exothermic reaction or excessive heat buildup, mix less than 100 grams at a time. Mixing smaller amounts will minimize heat buildup.

Applying: Bonding surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for H8000, and good bonds can be formed on most substrates after a solvent wipe. To assure maximum bond strength, surfaces must be mated within the adhesive's open time. Use enough material to completely fill the joint when parts are clamped.

Curing: Parts should remain undisturbed during the interval of time between the material's open time and fixture time. After the fixture time is achieved the material has reached handling strength. Temperature below 55°F will slow the cure; above 85°F will accelerate cure rate.

Clean Up: It is important to clean up excess adhesive from work area and application equipment before it hardens. Denatured alcohol and many common industrial solvents are suitable for removing uncured adhesive. H8000 is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flame.

Storage

Speedbonder adhesives should be stored in unopened containers in a dry location at 40°F +/- 5 F. For further specific shelf life information, contact your local Technical Service Center.

| Typical Cured Properties | Typical Value |
|--|------------------|
| Tensile Strength, psi, ASTM D 638 | 2300 to 2500 |
| Elongation, %, ASTM D 638 | 50 to 100 |
| Young's Modulus (psi) | 70,000 to 90,000 |
| Shear Strength @ 180°F, psi, ASTM D 1002 | 1900 to 2100 |

| Typical Uncured Properties | Part A | Part B | Mixed |
|---|--------------------|------------------|----------|
| Open Time @ 70°F, mins | - | - | 10 to 15 |
| Open Time @ 40°F, mins | | | 60 to 75 |
| Exotherm Time @ 70°F, mins | - | - | 18 to 25 |
| Fixture Time, 3 Kg weight, @ 70°F, mins | | | 15 to 20 |
| Color | yellow | Blue | Green |
| Viscosity, cP Brookfield HBT Spindle #6, 10 Rpm | 160,000 to 220,000 | 40,000 to 70,000 | - |
| Specific Gravity | 0.94 | 1.15 | 0.96 |
| Weight per Gallon, Lbs | 7.83 | 9.58 | - |
| Mix Ratio | | | |
| By weight | 8.17 | 1 | - |
| By volume | 10 | 1 | - |

| Typical Cured Properties | Typical Value |
|--|---------------|
| Shear Strength, psi, ASTM D1002 @ 70°F | |
| Aluminum | 3000 to 3500 |
| Steel | 3000 to 3500 |
| Stainless Steel | 2800 to 3100 |
| FRP | >1200 to 1600 |
| Gelcoat | >1000 to 1500 |

| Typical Cured Properties | Typical Value |
|--|---------------|
| Shear Strength, psi, ASTM D1002 @ 180 °F | |
| Aluminum | 1100 to 1300 |
| Etched Aluminum | 800 to 1000 |
| Ground Steel | 1000 to 1200 |

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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Packaging

490ml EPS cartridges
5 Gallon Pails
55 Gallon Drums

Note

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