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Product Description Sheet

Speedbonder® Product H4100

formerly Hysol® H4100

Industrial Products, May 2002

Description

Loctite® Speedbonder® H4100 is a non-sagging, two component, room temperature curing, 10:1 mix ratio, methacrylate adhesive system. H4100 is formulated to provide handling strength within minutes. H4100 provides greater versatility when used in aesthetic bonding applications. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures. H4100 is suitable for bonding a variety of substrates with a minimum of surface preparation.

Recommended Substrates: PVC, polycarbonate, acrylic, epoxy coated metal, ABS, stainless steel and FRP

Features

- Non-sagging gaps filled to .375 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

Typical Cured Properties	Typical Value
Tensile Strength, psi, ASTM D 638	4100 to 4300
Elongation, %, ASTM D 638	20 to 30
Hardness, Shore D	75 to 80

Typical Uncured Properties	Part A	Part B	Mixed
Open Time @ 70°F, mins	--	--	2 to 4
Fixture Time @ 70°F, mins	--	--	7 to 8
Color	Cream	Tan	Pale Yellow
Viscosity, cP	90,000 to 100,000	140,000 to 150,000	--
Specific Gravity	1.02	1.06	1.02
Weight per Gallon, Lbs	8.50	8.83	8.53
Mix Ratio			
By weight	9.6	1	--
By volume	10	1	--

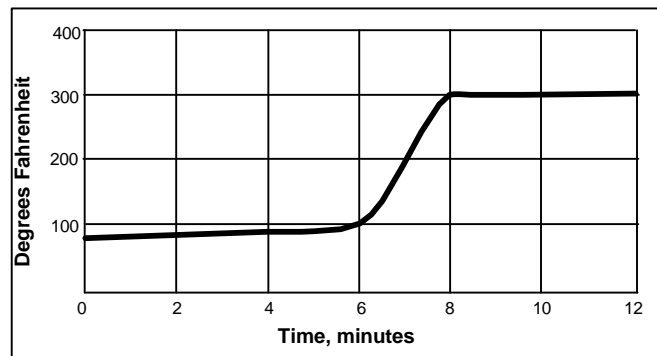
Typical Cured properties	
Shear Strength, psi, ASTM D1002	Typical Value
Steel	3140
Stainless Steel	2200
Zinc Dichromate	1180
Anodized Aluminum	2850
Polycarbonate	1220
Fiberglas	>1730
Gelcoat	>1400

Side Impact Strength, kJ/m ² , GM9751P test	Typical value
Aluminum	5 to 10

Block Shear, ASTM D4501, psi	Typical Value
PVC	2850
ABS	2270

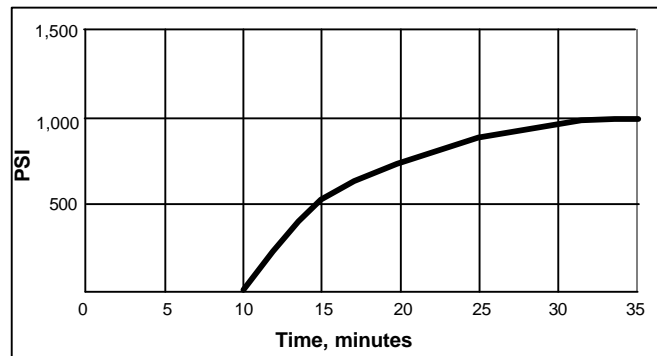
T-peel, pli, ASTM D1876	Typical Value
Steel	5
Aluminum	10 to 15

Peak Exotherm Curve -10 Gram Mass



Development of Bond Strength

Strength Build on FRP



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 hand mixing, combine Part A and Part B in the correct ratio and mix thoroughly. Once mixed, H4100 should achieve a uniform color. This is important! Heat buildup during and after mixing is normal. To reduce the likelihood of smaller amounts will minimize heat buildup.

Applying: Bonding surfaces should be clean, dry, and free of contamination. Extensive surface preparation is not required for H4100, 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. Speedbonder H4100 is flammable. Keep containers tightly closed after use. Keep away from heat, sparks, and open flames.

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.

Packaging

490ml EPS cartridges
5 Gallon Pails
55 Gallon Drum

Note

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, **Loctite Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Loctite Corporation's products. Loctite 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 Loctite 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.