LOCTITE

1001 Trout Brook Crossing
Rocky Hill, CT 06067-3910
Telephone: (860) 571-5100
FAX: (860) 571-5465

Product Description Sheet
Speedbonder® Product H4800
formerly Hysol® H4800

Industrial Products, May 2002

Description
Loctite® Speedbonder® H4800 is a highly thixotropic, two component, room temperature curing, 10:1 mix ratio methacrylate adhesive system. H4800 is formulated to provide a longer open time for manufacturers seeking between 20-25 minutes to correctly fixture parts. This adhesive forms resilient bonds and maintains its strength over a wide range of temperatures. H4800 is suitable for bonding a variety of substrates with a minimum of surface preparation.

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

Features
Non-sagging gaps filled to 1 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	3400 to 3600
Elongation, %, ASTM D 638	25 to 35
Peel Strength, pli, ASTM D 3167	60
Shear Strength @ 77°F, psi, ASTM D 1002	4500 to 4700
Shear Strength @ 180°F, psi, ASTM D 1002	2800 to 3000
Hardness, Shore D	75 to 80

Typical Uncured Properties	Part A	Part B	Mixed
Open Time @ 70°F, mins	--	--	20 to 25
Fixture Time @ 70°F, mins	--	--	35 to 55
Color	Cream	Yellow	Light Yellow
Viscosity, cP	30,000 to 70,000	50,000 to 60,000	--
Specific Gravity	1.03	.95	1.02
Weight per Gallon, Lbs	8.58	8.83	8.60
Mix Ratio			
By weight	9.7	1	--
By volume	10	1	--

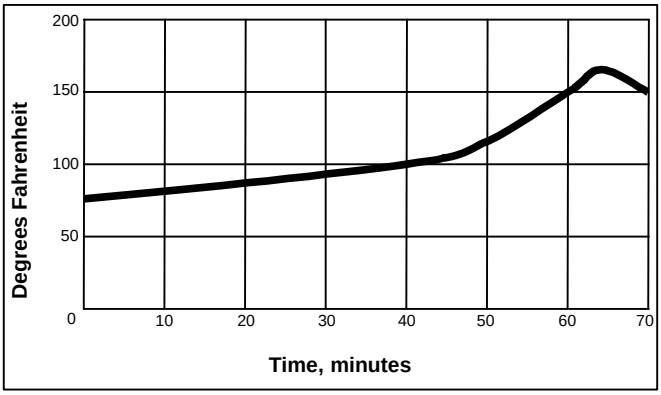
Shear Strength, psi, ASTM D1002	Typical Value
Aluminum	1810
Steel	3930
Stainless Steel	2020
Zinc Dichromate	1520
Anodized Aluminum	3440
Polycarbonate	470
Fiberglas	>1720
Gelcoat	>1590

Side Impact Strength, kJ/m^2, GM9751P test	Typical value
Aluminum	>42

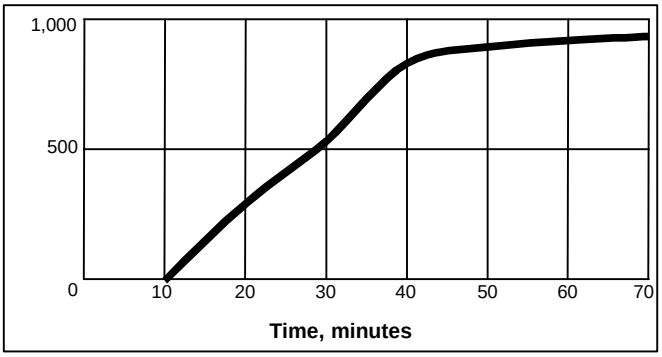
Block Shear, ASTM D4501, psi	Typical Value
PVC	2090
ABS	530

T-peel, pli, ASTM D1876	Typical Value
Steel	50
Aluminum	15 to 20

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, H4800 should achieve a uniform color. This is important! 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 H4800, 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 H4800 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^{o}F +/- 5 F. For further specific shelf life information, contact your local Technical Service Center.

Packaging

490ml EPS cartridges
5 Gallon Pails
55 Gallon Drums

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.