3M

Fastbond™ Construction Mastic 4323

Technical Data **August, 1995**

(Supersedes February 1, 1987)

Features

- High performance panel and construction adhesive.
- Bonds to many hardwoods, plywood, concrete, aluminum, steel, polystyrene foam.
- Ideal for building construction, remodeling, basement paneling, repair of buildings, furniture and similar structures.
- Resistant to flexing and racking.
- Resists water and heat.

Typical Physical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Base	Synthetic Rubber
Color	Gray
Weight per Gallon	8.8 - 9.2 lbs.
% Solids (weight)	64 - 68
Solvent	Isohexane blend
Flash Point (Setaflash)	+1°F (-17°C)
Coverage (per gallon) (typical)	1500 lineal feet of 1/8 inch diameter wet bead 375 lineal feet of 1/4 inch diameter wet bead
Consistency	Smooth, buttery mastic.
Bonding Range @72°F (22°C) 50% RH (1/4 in. diameter bead)	15 min. (approx.)
Caulk Rate, 1/8 in. Orifice/w 50 psi Pressure	900 grams/min.
Viscosity, Brookfield, #7 @ 10 RPM's @ 80°F (27°C)	200,000 - 300,000 cps

Handling/Application Suggestions

Surface Preparation: For optimum bond strengths the substrates should be cleaned of loose dirt and debris.

Application: 3M™ Fastbond™ 4323 Construction Mastic is ready for use as received with no mixing or dilution required. The adhesive can be applied from cartridges using hand caulking guns or pneumatic caulk or pump equipment. The mastic is also available in bulk where simple spatulas or notched trowels can be used to apply product. A 1/4 inch diameter bead when applied to one surface will have a bonding range of approximately 15 minutes at 72°F (22°C) / 50% R.H.

The mastic is usually applied to one of the bonding surfaces, although it may be applied to both surfaces in some applications. Green strength and the rate of strength buildup develops more rapidly in a dry, hot environment and more slowly as the humidity increases and/or the temperature drops.

Polystyrene foam bonding. Polystyrene Foam Attack @ 72°F (22°C) less than 3.0 mm. **Surfaces should be porous and be below 90°F (32°C).** Cut foam insulation to fit between furring strips. Apply a series of 1/4 in. beads to back of foam – approximately 8-10 in. apart. Press foam firmly onto wall.

Cleanup: Cleanup can be accomplished by removing the excess mastic with a spatula or similar tool. The remainder of the mastic can be wiped off using a solvent (petroleum distillate or acetone) soaked rag* This should be done before the mastic dries. Dried mastic can be cut off with a sharp tool such as a razor blade or utility knife.

***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use when handling such materials.

Application Equipment Suggestions

Note: Appropriate application equipment can enhance adhesive performance. We suggest the following application equipment for the user's evaluation in light of the user's particular purpose and method of application.

Pump – 24 to 1 ratio pump, divorced design, 2.0 cu. in/cycle with 4 1/4 in. air motor. Ball type check valves – double acting.

5 Gallon Drum Dispensing System:

Primer – Disc type follower plate.

55 Gallon Drum Dispensing System:

Primer – Gravity type with plate type follower plate.

Application Equipment Suggestions *(continued)*

Accessories:

Hose – Medium pressure nylon lined hose, 2,000 psi working pressure. Flow Gun.

Note: This material is compatible with Nylon®, Teflon® and polyethylene materials. Hose, wipers and packings should be selected with this information in mind.

Pressure Filling Caulking Guns – Same equipment as listed above.

Manual Caulking Gun Filling – Graco 225-975 gun loader. Force Flo, Inc. caulking gun loader. Ken-Mar Corporation, caulking gun loader, Model 4T.

Cleanup can be accomplished with a solvent such as 3M™ Scotch-Grip™ Solvent No. 2.*

***Note:** When using solvents, extinguish all ignition sources and follow the manufacturer's precautions and directions for use when handling such materials

Reference Information

Material Temperature: 40°F (4°C) – Flow Gun with 1/4 in. orifice.

Hose Assembly	Material Pressure	Output Lb./Min.	Material Pressure	Output Lb./Min.
10 ft. length 3/4 I.D. hose	1150 psi	2.5	–	–
20 ft. length 3/4 I.D. hose	1150 psi	2.1	2300 psi	2.9
20 ft. length 3/4 I.D. hose plus 10 ft. length 1/2 I.D. hose	1150 psi	.80	2300 psi	2.5
20 ft. length 1/2 I.D. hose	1150 psi	.5	2300 psi	1.8
10 ft. length 1/2 I.D. hose	1150 psi	1.3	2300 psi	2.8

Note: Material Pressure – Operating air pressure x pump ratio.

Typical Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Rate of strength buildup testing: Rate of strength buildup test results were run on fir to fir, 1/4 in. exterior grade plywood, overlap shear bonds at 77°F (25°C) at 50% relative humidity. Bonds were tested on a tensile tester using a jaw separation speed of 2 inches per minute.

Time Dried	Typical Shear Strength (Average – 3 Bonds)	
1 Hr.	66 psi	Cohesive failure
2 Hrs.	124 psi	Cohesive
4 Hrs.	183 psi	Cohesive
6 Hrs.	178 psi	Cohesive
*24 Hrs.	291 + psi	Wood failure
*48 Hrs.	290 + psi	Wood failure
* 7 Days	290 + psi	Wood failure

*Bond strength of the mastic beyond the limits of the substrate strength.

Fastbond™
Construction Mastic
4323

Storage and Shelf Life

Store product at 60-80°F (16-27°C) for maximum storage life. Higher temperatures reduce normal storage life. Lower temperatures cause increased viscosity of a temporary nature. Rotate stock on a "first in-first out" basis.=

Shelf Life: When stored at the recommended temperature in the original, unopened container, this product has a shelf life of 15 months.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for safety and health information before using this product.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-742-5933. Address correspondence to: 3M Industrial Tape and Specialties Division, 3M Center, Building 220-8E-04, St. Paul, MN 55144-1000. Our fax number is 612-733-9175. In Canada, phone: 1-519-451-2500. In Puerto Rico, phone: 1-809-750-3000. In Mexico, phone: 5-728-0400.

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ISO 9002

This Industrial Tape and Specialties Division product was manufactured under a 3M quality system registered to ISO 9002 standards.

For Additional Product Safety and Health Information, See Material Safety Data Sheet, or call:

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