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3M Fastbond™ Foam Adhesive 100 Neutral and Lavender

Technical Data **September, 2010**

Product Description

3M™ Fastbond™ Foam Adhesive 100 is a one-part, water-dispersed, fast setting adhesive. This neoprene-based product bonds many porous substrates to porous or non-porous substrates with minimal dry time. Adheres to many types of flexible polyurethane foam, latex foam fabric, polyester fiberfill, wood, plywood, particleboard and many plastic and metal surfaces.

Features

- Water-dispersed so is non-flammable in the wet state.
- High solids for high coverage.
- One component to simplify dispensing.
- Neoprene-based for high heat resistance.
- Low pressure sprayable to reduce misting and overspray.
- Non-dimpling for soft bondlines.
- Designed to be applied between two substrates. Application to substrates that results in direct exposure of the adhesive to light may result in eventual discoloration of the exposed adhesive. Direct exposure can be controlled by proper spray application. Adhesive may soak through very thin fabrics.
- Not recommended for exterior bare metal surfaces unless metal surfaces are completely dried by force drying and protected from moisture.
- **Certified to GREENGUARD® Product Emission Standard For Children and Schools(SM) for low emitting interior building materials:**
  - Addresses or Contributes to LEED™ EQ Credit 4.1: Low Emitting Materials: Adhesive and Sealants
  - Addresses or Contributes to LEED™ EQ Credit 4.5: Low Emitting Materials: Furniture and Furnishings
  - Addresses or Contributes to LEED™ EQ Credit 4.6: Low Emitting Materials: Ceiling and Wall Systems

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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 Polymer	Polychloroprene (neoprene)
Viscosity	10-40 cps (Brookfield RVF #1 sp @ 20 rpm)
Solids (by weight)	45-49%
Color	100 Neutral - White (semi-transparent when dry) 100 Lavender - Lavender (wet and dry)
Density	9.0-9.4 lbs. per gallon
Flashpoint	None (Setaflash® closed cup tester)
Coverage (approx.)	1000 sq ft per gallon (@ 2 grms/sq ft dry wt)
pH	8.4-9.0
Set Time	15 seconds
Bonding Range	20 minutes

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.

Air Atomizing Spray Equipment

Low to Medium Volume Applications				
Equipment Type	**Equipment Example***	**Air Cap**	**Fluid Tip**	**Atomizing Air Pressure****
Siphon Gun	Critter Siphon Gun #118	N/A	N/A	10 psi
Gravity Feed Gun	Binks Model 95G	66SD	65 SS (.059")	6 psi
	Binks M1-G	93P	94 (.055")	10 psi

Medium to High Volume Applications				
Equipment Type	**Equipment Example***	**Air Cap**	**Fluid Tip*****	**Atomizing Air Pressure****
Pressure Fed Hand Held Spray Guns	Binks 2001 SS	63P	63 SS (.028")	10 psi
	Binks 95	63P	63 SS (.028")	10 psi
	Binks Cub SL	25	25 T (.025")	10 psi

*Systems other than those listed can be used with 3M™ Fastbond™ Foam Adhesive 100. Existing spray equipment can also be adapted. Fluid hoses used previously with solvent-based adhesive or cleaning compounds must be replaced with new hose. Be sure to follow the equipment manufacturer's precautions, directions for use, and recommendations for such equipment. For additional information, contact your local representative.

**Starting air pressure on regulator. Adjust up or down based on application requirements.

*** Also available are 2 piece fluid tips as replacements fluid tips. These 2 piece tips allow for easier cleaning with less chance of adhesive contamination of the air passages in the spray gun.

Pressure Pots
Stainless steel pressure pots recommended. Non-stainless may be used with plastic liners if dip tube and fittings are changed to plastic or stainless steel.

Pumping Equipment
1 inch plastic diaphragm pump with PTFE checks and diaphragms. All pumps should be short stroked for pump longevity. For additional information, contact your local representative.

Filter (pump output)
Graco model 12 (stainless steel) with filter bag #521-264 or equivalent.

Hoses
All fluid hoses should be nylon or polyester lined. Hose fittings should be stainless steel or plastic. The typical fluid hose length @ 1/4 inch i.d. should be 15 to 25 ft. Use of larger fluid hose i.d. or lengths less than 15 ft. will result in loss of fluid pressure control. Use of smaller fluid hose I.D. lengths greater than 25 ft. can result in product coagulation in the line.

Note: Do not use fluid lines that have been previously used with solvent.
Do not use air operated piston pumps with these products.

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Handling/Application Instructions

Directions for Use:

Note: When using 3M™ Fastbond™ Foam Adhesive 100, it is required that at least one of each pair of substrates to be bonded be porous or water permeable.

1. **Surface Preparation:** Use only on clean, dry surfaces. Contamination of surfaces with oil, grease or release agents will prevent good, strong bonds.
2. **Application:** Adhesive does not require agitation before use. Adjust the spray equipment to give a fine, mist-like spray pattern. Spray a uniform, light coat of adhesive to **both** surfaces holding spray applicator 10-15 inches from surface.
3. **Coverage:** Coverage will depend on foam density, surface porosity of substrates, and strength of adhesive bond required. Typically one gallon of adhesive will cover up to 1000 square feet of substrate surface at a coating weight of approximately 2 dry grams of adhesive/sq. ft. In all cases, user evaluation will be required to determine the optimum coverage levels.

   Note: Application of adhesive at coating weights above 2 dry grams/sq. ft. or using a coarse spray pattern may result in longer activation times.
4. **Activation Time:** The adhesive activates sufficiently to permit making foam/foam bonds within 15 seconds after application. Bonds of foam or fabric to smooth, non-porous surfaces such as plastic or metal will require longer activation times. Bonds may be made up to 20 minutes after application depending on ambient temperature and humidity conditions. See Note above.
5. **Assembly and bonding:** For foam bonding and foam fabrication, pressure sufficient to compress the foam should be applied to the bond line by manual or mechanical methods. Bond the adhesive coated surfaces with sufficient pressure to ensure good contact across the entire adhesive bond line.
6. **Cleanup:** Wet adhesive may be removed with water containing a small amount of detergent.* Dry adhesive may be removed with a combination of 3M™ Citrus Base Cleaner or equivalent and mechanical systems such as wire brushing.

   Dry adhesive cannot be removed from porous surfaces such as foams or fabrics. Flush the adhesive wetted surfaces of spray equipment with water containing a small amount of detergent.* Follow with a flush of clean water.

*Cleaning Solution: One pint of detergent to five gallons of water.

****Note:** When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.

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Typical Adhesive Performance Characteristics

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

Heat Resistance: After air drying 24 hours, 4-inch cube knife edge foam bonds made with 3M™ Fastbond™ Foam Adhesive 100 on 1.2 lb./cu. ft. density urethane foam specimens withstood operating temperatures at 230°F (110°C) for 24 hours without showing any signs of failure along the bonded seams. The adhesive exhibited no indication of attacking or deteriorating the foam and the bondlines remained strong and flexible.

Peel Adhesion: Peel bonds of cotton duck (canvas) to various substrates were tested at a peel angle of 180 degrees at two inches per minute separation rate at a temperature of 77°F (25°C). The value listed is the average force required to peel the canvas from the substrates in pounds per inch of bond width (PIW).

Foam Tear: Polyurethane foam of 1.2 lb./cu. ft. density was bonded to various substrates at a dry coating weight of 2-3 gms./sq. ft. After bonds were made they were air-dried at ambient temperature for 24 hours. At the end of the drying period, an effort was made to pull the foam from the surface of the substrate. It was noted if the adhesive released from the substrate or if there was tearing of the foam.

Substrate	Peel Adhesion (PIW)	Foam Tear
ABS	2.0	Yes
Polyethylene	1.5	Yes
Polypropylene	0.9	Yes
PVC	1.9	Yes
Aluminum	1.1	Yes
Galvanized Steel	1.1	Yes
Cold Rolled Steel	1.1	Yes

Fog Test Results 3M™ Fastbond™ Foam Adhesive 100 Neutral*

GM 9505P (110c/38c-6 hrs/16 hrs-RT) Fog Number > 60 = pass			
Sample	**#1**	**#2**	**#3**
Actual	134.2 134.8 135.3 134.6	147.4 146.8 147.2 147.2	147.3 147.8 147.5 147.7
	134.4	**147.3**	**147.5**
fog #	87	96	96

***Important:** These Fog Test Results apply to 3M™ Fastbond™ Foam Adhesive 100 Neutral only. Because of the lavender dye, 3M™ Fastbond™ Foam Adhesive 100 Lavender does not pass the GM 9505P Fog Test.

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Storage

Best storage temperature is 60-80°F (15-27°C). Higher temperatures reduce normal storage life. Lower temperatures cause increased viscosity of a temporary nature. This water-dispersed adhesive will become unusable with prolonged storage below 40°F (4°C). Rotate stock on a "first in, first out" basis. Protect from freezing.

Shelf Life

When stored at the recommended temperature in the original, unopened container, this product has a shelf life of 12 months from date of shipment.

Precautionary Information

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, call 1-800-364-3577 or (651) 737-6501.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

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ISO 9001:2000

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