

3M

Super 77

Adhesive – Bulk Version

Technical Data

July, 2004

Features

- A sprayable, synthetic elastomer based adhesive for bonding many lightweight materials such as foils, plastics, papers, foams, metals and cardboard. Not recommended for flexible vinyls or automotive headliners.
- Fast tacking; ideal for low pressure spraying with minimal misting and cobwebbing. Offers high coverage and long bonding range.

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.

Viscosity:	200 - 5000 cps
Brookfield Viscometer:	RVF #4 Spindle @ 20 rpm, 80°F (27°C)
Solids (by wt.):	36 - 38%
Base:	Synthetic elastomer
Color (dry):	Nearly clear
Net Weight:	6.4 - 6.6 lbs./gal.
Flash Point (TCC):	-20°F (-29°C)
Coverage:	2183 ft. ² /gal. (@ 0.5 gms./ft. ² dry wt.)* 436 ft. ² /gal. (@ 2.5 gms./ft. ² dry wt.)**
Solvent:	Aliphatic hydrocarbons

*For lightweight bonding

**For heavier duty bonding

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Handling/Application Information

Directions for Use:

Work Area Inspection:

Read and follow the precautions before using product.

Surface Preparation:

For best results all surfaces to be bonded must be clean, dry, and free from dirt, dust, oil, loose paint, wax or grease, etc.

Working Temperature:

The adhesive and surfaces to be bonded should be 65°F (18°C) or above. Warm the container of adhesive by placing in a warm room, not in stove, oven or other possible ignition source. If the room must be warmed, turn off the heater before opening the container. Leave heater off until all vapors are gone.

Application:

Stir thoroughly before using. Brush, roll or spray uniform coat of adhesive to one or both surfaces to be bonded. Coating both surfaces gives greater strength and permits longer open time. For roll application, use a mohair roller cover with a phenolic core, the type used for synthetic lacquer paints. See Application Equipment section for additional equipment information.

Drying Time:

The bonding range when coating one or two surfaces is;

One surface: 10 seconds - 15 minutes.

Two surfaces: 10 seconds - 30 minutes.

Assembly:

Position surfaces carefully before assembly. Bond while adhesive is aggressively tacky. Join surfaces with firm pressure.

Cleanup:

Excess adhesive may be removed with a solvent such as 3M™ Scotch-Grip™ Solvent No. 2.*

***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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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.

1. **Pumping:** A 2:1 divorced design pump is suggested. Packings and glands, in contact with the adhesive, should be Teflon.[®]
2. **Spray:**

Production Type Spray Equipment

Spray Applicator	Air Cap	Fluid Tip	Air Pressure	Approximate Air Requirement*	Fluid Flow**
DeVilbiss JGA	24	FX	25 psi	3 CFM	6-12 fl. oz./min.
Binks No. 95 or 2001	66SD	63BSS	25 psi	3 CFM	6-12 fl. oz./min.

*3/4 H.P. Compressor for intermittent use.
 1 H.P. Compressor continuous use.

**To Measure Fluid Flow: Pressurize fluid source only; pull trigger, flow material into measuring device for 60 seconds, increase or decrease fluid source pressure to obtain desired fluid flow.

3. **Hoses:** All material hoses should be nylon or PVA lined.
4. **Brush/Roller:** Typical brushes/rollers designed for oil based paint may be used.

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.

Peel Adhesion: Peel bonds of cotton duck (canvas) to the listed substrate were tested at a peel angle of 180° at two inches per minute separation rate @ 75°F (24°C).

Substrate	Value (lbs./inch width)
Aluminum	4
Polypropylene	5
Polyethylene	4
ABS	5
FRP (fiberglass reinforced plastic)	8

Overlap Shear Strength: Overlap shear strength on birch plywood to itself tested at 0.1 inches per minute separation rate.

Test Temperature	Value (psi)
-30°F (-37°C)	265
75°F (24°C)	160
120°F (49°C)	65

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

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

Product Use All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.



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