

3M Super 77 Multipurpose Spray Adhesive

Technical Data

December, 2001

Product Description

A multipurpose high tack, high coverage, fast drying, translucent adhesive for permanently attaching foils, carpeting, many lightweight foams, paper, plastics, cardboard, felt and cloth to painted or unpainted metals, wood, hardboard and other base materials.

Features

- Convenient
- Low mist
- Fast, easy application
- High coverage
- Aggressive tack
- Long bonding range
- Excellent spray control
- Uniform spray coat
- High initial "grab" with sufficient open time to allow for positioning of materials.

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.

| | |
|--|---|
| Solids Content (by wt.): | ~ 25% |
| Base: | Synthetic Elastomers |
| Color (wet and dry): | Translucent |
| Net Weight* (approx.): | 16.75 oz. (475 gms.) |
| Spray Pattern: | Low Mist, Fine Particle Spray |
| Spray Width: | 4 1/2" - 6" |
| Bonding Range (1 Surface) (2 Surface): (Extra Strong Bonds) | 10 seconds - 15 minutes 10 seconds - 30 minutes Spray both surfaces - allow a minimum of 30 seconds drying time |
| Solvents: | Acetone, Heptane, Cyclohexane |
| Flash Point: | -42°F (-42°C) |
| Coverage* @ .5 gm/sq. ft.: | > 220 sq. ft. |
| % Volatile Organic Components (VOC): | 51% |
| Hazardous Air Pollutants (HAPS): | None |

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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.

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 jaw separation rate @ 75°F (24°C).

| Substrate | Value - PIW (lbs. / inch width) |
|-------------------------------------|---------------------------------|
| Aluminum | 3.9 |
| CRS (Cold Rolled Steel) | 7.5 |
| Stainless Steel | 6.8 |
| ABS | 7.1 |
| Acrylic | 8.6 |
| FRP (Fiberglass Reinforced Plastic) | 5.8 |
| Nylon 6,6 | 4.8 |
| Polycarbonate | 8.4 |
| Polyethylene | 2.6 |
| Polypropylene | 5.8 |
| PVC | 8.1 |

Peel Adhesion at Temperature: T-Peel bonds of cotton duck (canvas) to itself were tested at two inches per minute jaw separation rate.

| Test Temperature | Value - PIW (lbs. / inch width) |
|------------------|---------------------------------|
| -30°F (-34°C) | 3.4 |
| 75°F (24°C) | 11 |
| 100°F (38°C) | 8.3 |
| 120°F (49°C) | 1.6 |

Overlap Shear Strength: Overlap shear strength on birch plywood to itself tested and on maple to itself at two inches per minute jaw separation rate @ 75°F (24°C).

| Substrate | Value - PSI (lbs. / square inch) |
|-----------|----------------------------------|
| Birch | 145 |
| Maple | 147 |

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

| Test Temperature | Value - PSI (lbs. / square inch) |
|------------------|----------------------------------|
| -30°F (-34°C) | 876 |
| 75°F (24°C) | 145 |
| 100°F (38°C) | 32 |
| 120°F (49°C) | 18 |

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Application/Handling Information

Directions for Use

1. **Surface Preparation:** Surfaces must be clean, dry and free from dirt, dust, oil, loose paint, wax or grease, etc.
2. **Application Temperature:** For best results the temperature of the adhesive and the surfaces being bonded should be at least 65°F (18°C).
3. **Application:**
 - Shake can well.
 - Turn spray tip so arrow points to dot on rim. (**Note:** Always point spray tip away from yourself and others.)
 - Hold can 6-8 inches from surface to be sprayed.
 - Make bond while adhesive is aggressively tacky.
 - After use, invert can, depress spray tip until spray is free of adhesive.
 - Clean spray tip with turpentine.*
4. **Bonding Range:**
 - 1 surface - 10 seconds to 15 minutes
 - 2 surface - 10 seconds to 30 minutes
 - Extra Strong Bonds – Spray both surfaces and allow a minimum of 30 seconds drying time.
5. **Cleanup:** Excess adhesive may be removed with 3M™ Adhesive Remover Citrus Base.*

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

Storage and Shelf Life

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.

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Precautionary Information

Refer to Product Label and Material Safety Data Sheet for Health and Safety Information before using this product.

For Additional Information

To request additional product information or to arrange for sales assistance, call toll free 1-800-362-3550. Address correspondence to: 3M Engineered Adhesives Division, 3M Center, Building 220-8E-05, St. Paul, MN 55144-1000. Our fax number is 651-733-9175. In Canada, phone: 1-800-364-3577. In Puerto Rico, phone: 1-787-750-3000. In Mexico, phone: 52-70-04-00.

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This Engineered Adhesives Division product was manufactured under a 3M quality system registered to ISO 9002 standards.



Engineered Adhesives Division

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