3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357

Product Description

3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357 can be used to bond most rubber, cloth, metal, wood, foamed glass, paper honeycomb, decorative plastic laminates and many other substrates.

Features

- Long bonding range.
- Excellent initial strength.
- High heat resistance.
- 3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357 meets the specification requirements of MMM-A-121 and MIL-A-21366A.

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.

	3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357
Viscosity (approx.):	200-450 cps
Brookfield Viscometer:	RVF #2 Sp. @ 20 rpm @ 80°F (27°C)
Solids content (by wt.):	23 - 27%
Base:	Polychloroprene
Color:	Gray/Green, Light Yellow
Net weight (approx.):	6.6 - 7.0 lbs./gal.
Solvent:	petroleum distillate, acetone, MEK, toluene, n-hexane
Coverage (approx.) @ 2.5 gms (dry wt.)/ft.²:	308 ft.²/gal.
Suggested Application Method(s):	Spray, brush, roll or flow

Handling/Application Information

When bonding wood veneers, success is dependent on many variables such as environmental conditions, bonding process, type of base material, type of veneer, adhesive type and top coat finishing systems to name a few. It is the user's responsibility to thoroughly test any adhesive for its suitability in bonding wood veneers. It is also recommended to follow the veneer manufacturers recommendation and industry guidelines.

Directions For Use:

1. **Surface Preparation:** Remove all dust, dirt, oil, grease, wax, loose paint, etc. Wiping with solvent such as methyl ethyl ketone (MEK) will aid in preparing the surface for bonding.*

2. **Application Temperature:** For best results the temperature of the adhesive and surfaces to be bonded should be at least 65°F (18°C). If stored below 30°F (-1°C), warm-up to room temperature in a warm room only (do not exceed 120°F (49°C) followed by thorough agitation).

3. **Application:** Stir or agitate well before using for optimum results. Apply 2.5 gms to 3.5 gms/ft.^{2} dry weight to each surface. Unusually porous surfaces will require more adhesive.

4. **Drying Time:** The adhesive dries in about 10 minutes. High humidity will slow drying-high temperatures speed the drying. This adhesive has a bonding range of approximately 30 minutes when applied to both bond surfaces under conditions of 70°F (21°C) and 35% R.H. If the adhesive becomes too dry, apply another thin coat of adhesive to one surface, allow to become slightly tacky, and bond.

   Relative humidity above 50% can cause blushing (condensation of moisture on surface) and a false bond. To avoid this, we recommend a force drying temperature of 180-220°F (82-104°C). Force drying will also help remove the solvent more rapidly.

5. **Assembly:** Spacers, such as dowels or strips of laminate, may be used to help prevent premature adhesive/adhesive contact and bonding prior to positioning. Slide out of the spacers and apply uniform pressure, working toward the edges. A 3 in. roller used with maximum body pressure should be used to help ensure adequate contact and bonding, especially on edges. The use of a pinch roll is preferred for optimum performance. Bonded assemblies may be machined, trimmed, etc. immediately after bonding.

6. **Cleanup:** Adhesive residue of 3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357 may be removed from exposed surfaces with solvents such as methyl ethyl ketone (MEK), or 3M™ Citrus Base Industrial Cleaner.* For flushing fluid lines use MEK.

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

Application Equipment Suggestions

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. All material hoses should be nylon or PVA lined. Packings and glands in contact with the adhesive should be PTFE.
2. **Spray:**

Spray Applicator	Air Cap	Fluid Tip	Air Pressure	Approximate Air Requirement*	Fluid Flow**
DeVilbiss® JGA, MSA	777	FX (.042")	80 psi	18½ CFM	6 fl. oz./min.
Binks® No. 95 or 2001	63PH	63BSS (.046")	80 psi	23 CFM	6 fl. oz./min.

These adhesives are not recommended for Airless Spraying.

*5 H.P. Compressor for 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. **Brush/Roller:** Typical brushes/rollers designed for oil-based paint may be used.

Typical Adhesive Performance Characteristics

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180° Peel Strength–Canvas/Steel			Overlap Shear Strength–1/8" Birch/Birch		
Time @75°F (24°C)	Test Temp.	Value (lbs./in. width)	Time @75°F (24°C)	Test Temp.	Value (lbs./sq./in.)
1 day	75°F (24°C)	16	after 2 wk.	75°F (24°C)	452
3 days	75°F (24°C)	31	after 3 wk.	75°F (24°C)	536
5 days	75°F (24°C)	42	after 3 wk.	-30°F (-34°C)	964
7 days	75°F (24°C)	26	after 3 wk.	180°F (82°C)	199
2 wk.	75°F (24°C)	24	after 3 wk.	225°F (107°C)	158
3 wk.	75°F (24°C)	23			
after 3 wk.	-30°F (-34°C)	13			
after 3 wk.	150°F (66°C)	18.5			
after 3 wk.	180°F (82°C)	12			

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, 3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC-1357 has a shelf life of 15 months from the date of shipment.

Precautionary Information

Refer to Product Label and Safety Data Sheet (SDS) for health and safety information before using this product. For additional health and safety information, please visit www.3M.com/msds or call 1-800-364-3577 or (651) 737-6501.

For Additional Information

In the U.S., call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5714. If you are outside of the U.S., please contact your nearest 3M office or one of the following branches:

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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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This product will be manufactured under a 3M Quality Management System registered to the AS9100 standard.

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