

September, 2016

3M™ Neoprene High Performance Contact Adhesive 1357

Product Description

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

Product Features

- Long bonding range.
- Excellent initial strength.
- High heat resistance.



Technical Information Note

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

Typical Physical Properties

Property	Values		Notes	Test Condition
Color	Gray/Green, Light Yellow			
Solids Content by Weight	23 to 27 %			
Flash Point	-26 °C	-14 °F	TCC	
Solvent Resistance	Petroleum distillate, acetone, MEK, toluene, n-hexane			
Coverage	308 sq ft/gal		@ 2.5 g/ft ² dry wt.	
Viscosity	200 to 450 cP		Brookfield Viscometer RVF #2 spindle @ 20 rpm	80°F(27°C)

Typical Uncured Physical Properties

Property	Values
Base	Polychloroprene
Net Weight	6.6 to 7 lb/gal

Typical Performance Characteristics

180° Peel Adhesion	Dwell/Cure Time	Dwell Time Units	Temp C	Temp F
256 oz/in	24	hr	22C	72F
496 oz/in	72	hr	22C	72F
672 oz/in	120	hr	22C	72F
416 oz/in	168	hr	22C	72F
384 oz/in	2	wk	22C	72F
368 oz/in	3	wk	22C	72F
208 oz/in	3	wk	-34C	-29F
296 oz/in	3	wk	66C	150F

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Typical Performance Characteristics (continued)

180° Peel Adhesion	Dwell/Cure Time	Dwell Time Units	Temp C	Temp F
192 oz/in	3	wk	82C	180F

Property: 180° Peel Adhesion
 Environmental Condition: 52%RH
 Substrate: Canvas to Steel

Overlap Shear Strength	Dwell/Cure Time	Test Condition
452 lb/in ²	2 wk @ Room Temperature	Room Temperature
536 lb/in ²	3 wk @ Room Temperature	Room Temperature
964 lb/in ²	3 wk @ Room Temperature	-30°F(-34°C)
199 lb/in ²	3 wk @ Room Temperature	180°F(82°C)
158 lb/in ²	3 wk @ Room Temperature	225°F(107°C)

Property: Overlap Shear Strength
 Substrate: Birch to Birch
 Substrate Notes: 1/8in

Handling/Application Information

Application Techniques

Spray, brush, roll or flow

Application Equipment

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.

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Handling/Application Information (continued)

Directions for Use

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™ Neoprene High Performance Contact Adhesive 1357 and 1357-L 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.

Storage and Shelf Life

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.

When stored at the recommended conditions in the original, unopened container, 3M™ Neoprene High Performance Contact Adhesive 1357 has a shelf life of 30 months from date of manufacture.

Industry Specifications

NFPA 130 test report for details (ASTM E162, ASTM E662, SMP 800-C, BSS 7239)

NFPA 130 test report for details (ASTM E1354)

Trademarks

3M is a trademark of 3M Company.

3M™ Neoprene High Performance Contact Adhesive 1357

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/company-us/all-3m-products/-/3M-Neoprene-High-Performance-Contact-Adhesive-1357?N=5002385+3293242410&rt=rud
Safety Data Sheet (SDS)	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=1357

Family Group

	1357	1357-L
Color	Gray/Green, Light Yellow	Gray/Green
Solids Content by Weight (%)	23 to 27	17 to 19

ISO Statement

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

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.

Information

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