Neoprene High Performance Rubber & Gasket Adhesives

1300 • 1300L

Technical Data **March, 2015**

Product Description

3M™ Neoprene High Performance Rubber & Gasket Adhesives 1300 and 1300L are the most versatile of our rubber and gasket adhesives. They may be used to bond metal, wood, most plastics, and neoprene, reclaim, SBR, and butyl rubber. They have high immediate strength and excellent heat resistance. 3M Scotch- Weld Adhesive 1300L is a lower solids, lower viscosity version of 3M Adhesive 1300.

Features

- 3M™ Neoprene High Performance Rubber & Gasket Adhesive 1300L meets specification requirements of MMM-A-121.
- Temperature performance range is -30°F (-34°C) to 300°F (149°C).
- Bonding Range: 3M Adhesive 1300 up to 12 minutes; 3M Adhesive 1300L up to 8 minutes.
- Bonds neoprene, SBR, butyl and other types of rubber to various substrates.
- 3M Adhesive 1300L is a lower solids viscosity version of 3M Adhesive 1300, for easier brushing and sprayability.

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.

Product	3M™ Neoprene High Performance Rubber and Gasket Adhesives	
	1300	1300L
Viscosity (approx.):	1500 - 4000 cps	250 - 1000 cps
Brookfield Viscometer:	RVF #4 sp @ 20 rpm@80°F (27°C)	RVF #2 sp @ 20 rpm@80°F (27°C)
Solids (by wt.):	34 - 39%	26 - 33%
Base:	Polychloroprene	Polychloroprene
Color:	Yellow	Yellow
Net Wt. (approx.):	7.1 - 7.5 lbs/gal	6.9 - 7.3 lbs/gal
Flashpoint (c.c.):	-14°F (-26°C)	-14°F (-26°C)
Solvent:*	Petroleum distillate, methyl ethyl ketone and toluene	Petroleum distillate, methyl ethyl ketone and toluene

*These products contain non-photochemically reactive solvent.

Handling/ Application Information

Directions For Use:

1. **Surface Preparation**
   Remove all dust, dirt, oil, grease, wax, loose paint, etc. Wiping with a 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), allow adhesive to warm to room temperature by placing in a warm room only (do not exceed 120°F [49°C]) followed by thorough agitation.
3. **Application**
   Stir well before using. Brush, flow or spray a thin, uniform coating of adhesive to each surface. A coating of 2.5 gms to 3.5 gms/ft.^{2} dry weight per surface is recommended. Porous surfaces may require more than one coat. A uniform, glossy film indicates sufficient adhesive.
4. **Drying Time**
   Allow adhesive to dry until no longer wet (maximum dry time about 4 minutes).
5. **Bonding Range**
   Once dry, these adhesives have a short bonding range (up to 8 to 12 minutes).
6. **Assembly**
   Position surfaces carefully before assembly. Bonding is immediate upon contact. Apply sufficient pressure to ensure good contact between coated surfaces. Bonded parts may be handled immediately.
7. **Reactivation**
   Greater immediate strength may be obtained by solvent reactivation. To solvent reactivate, coat both surfaces with adhesive and allow to dry tack free. Lightly wipe one surface with methyl ethyl ketone (MEK)* and complete bonding within 30 seconds.
8. **Cleanup**
   Use a solvent such as 3M™ Solvent No. 2* or methyl ethyl ketone (MEK)* to clean brushes immediately after use. Excess adhesive may be removed from other surfaces with 3M™ Citrus Base Cleaner* or equivalent.

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

Application Equipment Suggestions

Note: Appropriate application equipment enhances 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:**

   5 Gallon Pail Dispensing System:

   1. 3M™ Neoprene High Performance Rubber & Gasket Adhesive 1300 – 4:1 double acting ball type check pump, 4 cu. in./cycle 3" air motor. Pail cover required to reduce solvent loss.
   2. 3M™ Neoprene High Performance Rubber & Gasket Adhesive 1300L – Use a pressure pot for material supply.

   55 Gallon Pail Dispensing System:

   1. 3M Adhesive 1300 – 4:1 double acting ball type check pump, 4 cu. in./cycle 3" air motor, bung style pump.
   2. 3M Adhesive 1300L – 2:1 divorced design pump.

Application Equipment Suggestions ***(continued)***

Accessories:

1. Hose – Samuel Moore Synflex or equivalent, 500 psi working pressure minimum.

Chemical Resistance Requirements:

1. Packings, glands and hoses in contact with this adhesive must be resistant to ketones and aromatic solvents. Nylon and PTFE lined or coated parts are suggested.

2. Spraying:

3M™ Neoprene High Performance Rubber & Gasket Adhesive 1300L

Spray Gun	Air Cap	Fluid Tip	Atomizing Air Pressure	Approximate Air Requirement*	Fluid Flow**
Air Spray – Hand Held					
Binks 2001, 95	63PH	63BSS (.046")	70 psi	21 CFM	6.5 fl. oz./min.
DeVilbiss JGA, MSA	704	FX (.042")	70 psi	17 CFM	5 fl. oz./min.
Air Spray – Automatic					
Binks 21, 95A, 610	63PH	63BSS (.046")	70 psi	21 CFM	6.5 fl. oz./min.
DeVilbiss AGX	704	FX (.042")	70 psi	17 CFM	5 fl. oz./min.

Note: These adhesives are not recommended for Airless Spraying.

*3 H.P. Compressor for intermittent use.

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.

All material hoses should be nylon or PVA lined. Packings and glands in contact with these adhesives should be lined or coated with a non-stick surface.

3. Brushes

Use brushes designed for oil based paint.

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.

180° Peel Strength Canvas/Steel			Overlap Shear Strength** 1/8" Birch / 1/8" Birch	
Time @75°F (24°C)	**Test Temp.**	**Value (piw)**	**Test Temp.**	**Value (psi)**
1 day	75°F (24°C)	18	-30°F (-34°C)	343
3 days	75°F (24°C)	48	75°F (24°C)	549
5 days	75°F (24°C)	51	150°F (65°C)	195
7 days	75°F (24°C)	52	180°F (82°C)	136
2 weeks	75°F (24°C)	30*	200°F (93°C)	85
3 weeks	75°F (24°C)	20*	225°F (110°C)	85
After 3 weeks	-30°F (-34°C)	49		
After 3 weeks	150°F (66°C)	32.5		
After 3 weeks	180°F (82°C)	26		

*These values DO NOT reflect a loss in strength – but do represent an increase in modulus. Because of the adherends and procedure, bond failure is from the canvas. The actual strength of these adhesives is increasing.

**Bonds aged 2 weeks at room temperature before testing.

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 temperature 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.

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

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