



Scotch-Weld™

Neoprene High Performance Rubber & Gasket Adhesives

1300 • 1300L

Technical Data

December, 2007

Product Description

3M™ Scotch-Weld™ 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. Scotch-Weld Adhesive 1300L is a lower solids, lower viscosity version of Scotch-Weld Adhesive 1300.

Features

- 3M™ Scotch-Weld™ 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: Scotch-Weld Adhesive 1300 up to 12 minutes; Scotch-Weld Adhesive 1300L up to 8 minutes.
- Bonds neoprene, SBR, butyl and other types of rubber to various substrates.
- Scotch-Weld Adhesive 1300L is a lower solids viscosity version of Scotch-Weld 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™ Scotch-Weld™ 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.



3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesives 1300 • 1300L



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™ Scotch-Weld™ 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™ Scotch-Weld™ 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™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesive 1300L – Use a pressure pot for material supply.

55 Gallon Pail Dispensing System:

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

3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesives 1300 • 1300L

**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 Teflon® lined or coated parts are suggested.

2. Spraying:

**3M™ Scotch-Weld™ 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 with these adhesives should be Teflon® lined or coated.

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.



3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesives 1300 • 1300L



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.

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.

Warranty and Limited Remedy Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

Limitation of Liability Except where prohibited by law, 3M and seller will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



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



Industrial Adhesives and Tapes Division

3M Center, Building 21-1W-10, 900 Bush Avenue
St. Paul, MN 55144-1000
800-362-3550 • 877-369-2923 (fax)
www.3M.com/industrial



*Recycled Paper
40% pre-consumer
10% post-consumer*

3M and Scotch-Weld are trademarks of 3M Company.
Teflon is a registered trademark of E. I. DuPont de Nemours Co.
Printed in U.S.A.
©3M 2007 78-6900-9887-2 (12/07)