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English-US

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Technical Data Sheet

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

Product Details

Regulatory Info/SDS

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.

Product 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.

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 Uncured Physical Properties

Attribute Name	Value
Net Weight	6.9 — 7.3 lb/gal
Base	Polychloroprene

Typical Physical Properties

Attribute Name	Temperature	Value
Color		Yellow
Solids Content by Weight		26 — 33 %
Carrier Solvent		Petroleum distillate, methyl ethyl ketone and toluene (These products contain non-photochemically reactive solvent)
Flash Point		-26 °C (-14 °F) [1]
Viscosity	27 °C (80 °F)	250 — 1000 cP [2]

[1] Closed Cup

[2] Brookfield Viscometer RVF #2 spindle @ 20 rpm

Typical Performance Characteristics

180° Peel Adhesion

Substrate: Canvas to Steel

Dwell Time	Temperature	Value
24 h	22 °C (72 °F)	288 oz/in
72 h	22 °C (72 °F)	768 oz/in
120 h	22 °C (72 °F)	816 oz/in
168 h	22 °C (72 °F)	832 oz/in

Dwell Time	Temperature	Value
2 week	22 °C (72 °F)	480 (This value DOES 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.) oz/in
3 week	22 °C (72 °F)	320 (This value DOES 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.) oz/in
3 week	-34 °C (-29 °F)	784 oz/in
3 week	66 °C (150 °F)	520 oz/in
3 week	82 °C (180 °F)	416 oz/in

Overlap Shear Strength

Substrate: Birch to Birch
Temperature: 22 °C (72 °F)
Dwell Time: 2 week

Test Condition	Value
-34°C (-30°F)	343 lb/in² [1]
	549 lb/in² [1]
66°C (150°F)	195 lb/in² [1]
82°C (180°F)	136 lb/in² [1]
93°C (200°F)	85 lb/in² [1]
107°C (225°F)	85 lb/in² [1]

[1] 1/8in thick substrates

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

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.

5**5 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.

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.

Industry Specifications

MMM-A-121

Storage and Shelf Life

Store under normal conditions of 16° to 27°C (60° to 80°F) and 40 to 60% relative humidity in the original, unopened packaging, out of direct sunlight. Lower temperatures cause increased viscosity of a temporary nature. For best performance, use this product within 30 months from date of manufacture.

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

Automotive Disclaimer

Select Automotive Applications:
This product is an industrial product and has not been designed or tested for use in certain automotive applications, such as automotive electric powertrain battery or high voltage applications, which may require the product to be manufactured in a IATF certified facility, meet a Ppk of 1.33 for all properties, undergo an automotive production part approval process (PPAP), or fully adhere to automotive design or quality system requirements (e.g., IATF 16949 or VDA 6.3). Customer assumes all responsibility and risk if customer chooses to use this product in these applications.

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ISO Statement

This product was manufactured under a 3M quality system registered to ISO 9001 standards.

3M™ Industrial Adhesives and Tapes Division
3M Center, St. Paul, MN 55144-1000
3M.com/iatd