

Technical Data Sheet

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

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 Physical Properties

Property	Values	Additional Information
Solids Content by Weight	26 to 33 %	
Color	Yellow	
Flash Point	-14 °F	View 
Notes: Closed Cup		
Flash Point	-26 °C	View 
Notes: Closed Cup		
Carrier Solvent	Petroleum distillate, methyl ethyl ketone and toluene (These products contain non-photochemically reactive solvent)	
Viscosity	250 to 1000 cP	View 
Test Condition: 80°F(27°C)		

Notes: Brookfield Viscometer RVF #2 spindle @ 20 rpm

Typical Uncured Physical Properties

Property	Values	Additional Information
Base	Polychloroprene	
Net Weight	6.9 to 7.3 lb/gal	

Typical Performance Characteristics

Property	Values	Additional Information
180° Peel Adhesion	288 oz/in	View
Dwell/Cure Time: 24.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	768 oz/in	View
Dwell/Cure Time: 72.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	816 oz/in	View
Dwell/Cure Time: 120.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	832 oz/in	View
Dwell/Cure Time: 168.0 Dwell Time Units: hr Temp C: 23C Temp F: 72F Environmental Condition: 50%RH Substrate: Canvas to Steel		
180° Peel Adhesion	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	View
Dwell/Cure Time: 2.0 Dwell Time Units: week		

Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion

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

View 

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion

784 oz/in

View 

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: -34C
Temp F: -29F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion

520 oz/in

View 

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 66C
Temp F: 150F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

180° Peel Adhesion


416 oz/in

View 

Dwell/Cure Time: 3.0
Dwell Time Units: week
Temp C: 82C
Temp F: 180F
Environmental Condition: 50%RH
Substrate: Canvas to Steel

Overlap Shear Strength

343 lb/in²

View 

Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: -30°F(-34°C)
Substrate: Birch to Birch

Notes: 1/8in thick substrates

Overlap Shear Strength

549 lb/in²

View 

Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: Room Temperature
Substrate: Birch to Birch

Notes: 1/8in thick substrates


Overlap Shear Strength

195 lb/in²

View 

Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: 150°F(66°C)
Substrate: Birch to Birch

Notes: 1/8in thick substrates

Overlap Shear Strength	136 lb/in ²	View 
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Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: 180°F(82°C)
Substrate: Birch to Birch

Notes: 1/8in thick substrates

Overlap Shear Strength	85 lb/in ²	View 
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Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: 200°F(93°C)
Substrate: Birch to Birch

Notes: 1/8in thick substrates

Overlap Shear Strength	85 lb/in ²	View 
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Dwell/Cure Time: 2.0
Dwell Time Units: week
Temp C: 23C
Temp F: 72F
Test Condition: 225°F(107°C)
Substrate: Birch to Birch

Notes: 1/8in thick substrates

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 temperature in the original, unopened container this product has a shelf life of 30 months from date of manufacture.

Industry Specifications

MMM-A-121

Automotive Disclaimer

Automotive Applications: This product is an industrial product and has not been designed or tested for use in certain automotive applications, including, but not limited to, automotive electric powertrain battery or high voltage applications. This product does not fully adhere to typical automotive design or quality system requirements, such as IATF 16949 or VDA 6.3. This product may not be manufactured in an IATF certified facility and may not meet a Ppk of 1.33 for all properties. The product may not undergo an automotive production part approval process (PPAP). Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer’s automotive application and for conducting incoming inspections before use of the product. Failure to do so may result in injury, death, and/or harm to property. No written or verbal statement, report, data or recommendation by 3M related to automotive use of the product shall have any force or effect unless in an agreement signed by the Technical Director of 3M’s Automotive Division. Customer assumes all responsibility and risk if customer chooses to use this product in an automotive electric powertrain battery or high voltage application, and 3M will not be liable for any loss or damage arising from or related to the 3M product or customer’s use of the product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity or recall costs), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability. In no event shall 3M be liable for any damages in excess of the purchase price paid for the product.

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Bottom Matter

3M
Industrial Adhesives and Tapes Division
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
800-362-3550

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Handling/Application Information

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.

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.

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

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.

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.

References

Property	Values
3m.com Product Page	https://www.3m.com/3M/en_US/p/d/b5005321070/
Safety Data Sheet SDS	https://www.3m.com/3M/en_US/company-us/SDS-search/results/?gsaAction=msdsSRA&msdsLocale=en_US&co=ptn&q=1300L

Family Group

Link Tags:

• 1300L

Products	Solids Content by Weight
1300L	26 to 33 %

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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