

3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesive EC-1300 and EC-1300L

Technical Data Sheet

Product Description

3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesives EC-1300 and EC-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.

Features

- 3M™ Scotch-Weld™ Neoprene High Performance Rubber & Gasket Adhesive EC-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 EC-1300 up to 12 minutes; 3M Adhesive EC-1300L up to minutes.
- Bonds neoprene, SBR, butyl and other types of rubber to various substrates.
- 3M Adhesive EC-1300L is a lower solids viscosity version of 3M Adhesive EC-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 | EC-1300 | EC-1300L |
|------------------------|--|--|
| Viscosity (approx): | 1300 – 4100 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): | 33.5 to 39.5% | 26.0 to 33.0% |
| Base: | Polychloroprene | Polychloroprene |
| Color: | Yellow | Yellow |
| Net Wt. (approx.): | 7.3 – 7.7 lbs/gal | 6.9 – 7.3 lbs/gal |
| 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

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. Curing Time

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.

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 | Test Temperature | Value (piw) | Test Temperature | 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 (66°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.

Authorization to Use

Ensure products meet all applicable specifications, standards, and maintenance manual requirements for the platform being worked on and validate all aircraft approvals against current technical documentation.

Shelf Life and Storage Conditions

3M™ Scotch-Weld™ Neoprene High Performance Rubber and Gasket Adhesives EC-1300 and EC-1300L shelf life is 15 months from the date of shipment from 3M when stored between 60° to 80°F (16° to 27°C) in the original unopened container.

Precautionary Information

Refer to Product Label and 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, and visit www.3m.com/3M/en_US/company-us/SDS-search/

For Additional information

In the U.S., call toll free 1-800-235-2376, or fax 1-800-435-3082 or 651-737-2171. For U.S. Military, call 1-866-556-5712. If you are outside of the U.S., please contact your nearest 3M office.

These products are manufactured under a 3M Quality Management System registered to the AS9100 standard

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