3M™ Scotch-Grip™ Rubber and Gasket Adhesives 1300 • 1300L

Technical Data March, 2003

Product Description

3M™ Scotch-Grip™ Rubber and 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-Grip 1300L is a lower solids, lower viscosity version of Scotch-Grip 1300.

Features

- Scotch-Grip 1300L meets specification requirements of MMM-A-121.
- Temperature performance range is -30°F (-34°C) to 300°F (149°C).
- Bonding Range: Scotch-Grip 1300 up to 12 minutes; Scotch-Grip 1300L up to 8 minutes.
- Bonds neoprene, SBR, butyl and other types of rubber to various substrates.
- Scotch-Grip 1300L is a lower solids viscosity version of Scotch-Grip 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.

<table>
<thead>
<tr>
<th>Product</th>
<th>Scotch-Grip 1300</th>
<th>Scotch-Grip 1300L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity (approx.):</td>
<td>1500 - 4000 cps</td>
<td>250 - 1000 cps</td>
</tr>
<tr>
<td>Brookfield Viscometer:</td>
<td>RVF #4 sp @ 20 rpm@80°F (27°C)</td>
<td>RVF #2 sp @ 20 rpm@80°F (27°C)</td>
</tr>
<tr>
<td>Solids (by wt.):</td>
<td>34 - 39%</td>
<td>26 - 33%</td>
</tr>
<tr>
<td>Base:</td>
<td>Polychloroprene</td>
<td>Polychloroprene</td>
</tr>
<tr>
<td>Color:</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
<tr>
<td>Net Wt. (approx.):</td>
<td>7.1 - 7.5 lbs/gal</td>
<td>6.9 - 7.3 lbs/gal</td>
</tr>
<tr>
<td>Flashpoint (c.c.):</td>
<td>-14°F (-26°C)</td>
<td>-14°F (-26°C)</td>
</tr>
<tr>
<td>Solvent:*</td>
<td>Petroleum distillate, methyl ethyl ketone and toluene</td>
<td>Petroleum distillate, methyl ethyl ketone and toluene</td>
</tr>
</tbody>
</table>

*These products contain non-photochemically reactive solvent.
Scotch-Grip™
Rubber and 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 solvent such as 3M™ Scotch-Grip™ Solvent No. 3* or 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-Grip™ Solvent No. 2* or No. 3* or MEK* to clean brushes immediately after use. Excess adhesive may be removed from other surfaces with 3M™ Citrus Base Industrial 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-Grip™ Rubber and 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-Grip™ Rubber and Gasket Adhesive 1300L – Use a pressure pot for material supply.

   55 Gallon Pail Dispensing System:
   1. Scotch-Grip 1300 – 4:1 double acting ball type check pump, 4 cu. in./cycle 3” air motor, bung style pump.
   2. Scotch-Grip 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 Teflon® lined or coated parts are suggested.

2. Spraying:
3M™ Scotch-Grip™ Rubber and Gasket Adhesives 1300L

<table>
<thead>
<tr>
<th>Spray Gun</th>
<th>Air Cap</th>
<th>Fluid Tip</th>
<th>Atomizing Air Pressure</th>
<th>Approximate Air Requirement*</th>
<th>Fluid Flow**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Spray – Hand Held</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binks 62, 2001, 95</td>
<td>63PH</td>
<td>63BSS (.046&quot;)</td>
<td>70 psi</td>
<td>21 CFM</td>
<td>6.5 fl. oz./min.</td>
</tr>
<tr>
<td>DeVilbiss JGA, MSA</td>
<td>704</td>
<td>FX (.042&quot;)</td>
<td>70 psi</td>
<td>17 CFM</td>
<td>5 fl. oz./min.</td>
</tr>
<tr>
<td><strong>Air Spray – Automatic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Binks 21, 61, 95A, 610</td>
<td>63PH</td>
<td>63BSS (.046&quot;)</td>
<td>70 psi</td>
<td>21 CFM</td>
<td>6.5 fl. oz./min.</td>
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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 Teflon lined or coated.

3. Brushes
Use brushes designed for oil based paint.

Typical Adhesive Performance Characteristics

<table>
<thead>
<tr>
<th>Time @75°F (24°C)</th>
<th>180° Peel Strength Canvas/Steel Value (piw)</th>
<th>Overlap Shear Strength** 1/8” Birch / 1/8” Birch Test Temp. Value (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>75°F (24°C)</td>
<td>18</td>
</tr>
<tr>
<td>3 days</td>
<td>75°F (24°C)</td>
<td>48</td>
</tr>
<tr>
<td>5 days</td>
<td>75°F (24°C)</td>
<td>51</td>
</tr>
<tr>
<td>7 days</td>
<td>75°F (24°C)</td>
<td>52</td>
</tr>
<tr>
<td>2 weeks</td>
<td>75°F (24°C)</td>
<td>30*</td>
</tr>
<tr>
<td>3 weeks</td>
<td>75°F (24°C)</td>
<td>20*</td>
</tr>
<tr>
<td>After 3 weeks</td>
<td>-30°F (-34°C)</td>
<td>49</td>
</tr>
<tr>
<td>After 3 weeks</td>
<td>150°F (66°C)</td>
<td>32.5</td>
</tr>
<tr>
<td>After 3 weeks</td>
<td>180°F (82°C)</td>
<td>26</td>
</tr>
</tbody>
</table>

*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.
### Scotch-Grip™
#### Rubber and 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.

#### For Additional Information

#### Important Notice
3M MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user’s application. Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental conditions in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which 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 application.

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