Masking and Bonding Solutions for Powder Coating Operations
**Pre-Powder Coat Bonding and Masking Solutions**

**3M™ VHB™ Tape GPH Series**
- Fast and easy-to-use permanent bonding method provides high strength and long term durability
- Excellent high temperature resistance (short term 450 °F) allows for bonding prior to powder coat or liquid painting processes
- Allows the use of thinner, lighter weight and dissimilar materials

**3M™ Scotch-Weld™ Structural Acrylic Adhesives DP8407NS**
3M next generation structural acrylic adhesives provide a faster bond, deliver higher impact resistance and high temperature performance, helping you to build better products and improve productivity.
- High strength, high peel
- Non-sag
- 6 minute work life
- Time to handling strength approximately 24 minutes
- Works well for post-powder coat bonding
- Suitable prior to chrome plating

**DP8407NS: Dead Load Holding Strength at 400°F / 204°C for 1 Hour**
Withstands a load of 75 psi at 400°F/204°C for 1 hour, but not at 100 psi

**Chart Shows the Shear Load (Dead Load in Shear) that the Adhesive can Hold at 400°F (Powder Coat Temperature).**
- Blue bar: load held
- Orange bar: load did not hold (fail)

**DP8407NS: Bond Strength Retention after High Temperature and Humidity Exposure**
Overlap shear on abraded cold rolled steel; 72°F test temperature; 500 hours exposure 150°F + 80% RH

**3M™ Polyester Tapes 8991 & 8992 and 3M™ Polyimide Tapes 8997 & 8998 for Powder Coating**
- With pressure sensitive silicone adhesive, 3M™ Polyester Tapes 8991 and 8992 and 3M™ Polyimide Tapes 8997 and 8998 grab on contact for reliable masking in most powder coat painting operations. The polyester tapes can withstand bake cycles up to 400°F/204°C and the polyimide tapes up to 500°F/260°C.
- Clean removal, with a sharp, clean paint edge
- Resists shrinking, curling and edge lifting
- 8991 Blue – Conformable
- 8992 Green – Strong backing
- 8997 Light Amber – Conformable
- 8998 Dark Amber – Strong backing
- All are available with a linered version for easy application and die-cutting

On abraded, cold rolled steel, DP8407NS shows high shear strength after exposure to 150°F and 80% relative humidity for 500 hours (accelerated outdoor weathering), whereas some competitive acrylics will lose strength due to steel corrosion accelerated by the adhesive.
**Post-Powder Coat Bonding Solutions**

**3M™ VHB™ Tape 5952**
- Provides a strong bond on powder coated surfaces and difficult-to-stick surfaces
- Eliminates drilling, grinding, refinishing, screwing, welding, and clean-up
- Pressure sensitive adhesive bonds on contact to provide immediate handling strength

**3M™ Scotch-Weld™ Structural Acrylic Adhesives DP8805NS and DP8810NS**
- Over three times the impact strength of conventional acrylic adhesives
- Fast curing with an 18-month shelf life
- Low odor

**3M™ Scotch-Weld™ Urethane Adhesives DP6310NS and DP6330NS**
- High performing two component polyurethane
- Easy mixing, exceptional non-sag formulation
- Suitable for bonding to a wide variety of substrates, including painted surfaces

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**Why choose a tape or adhesive?**

**Benefits of tape and adhesive bonding solutions**
- Improves aesthetics
- Weight reduction
- Quick and easy application

**Benefits of a tape solution**
- Very strong bond that can replace spot welds and rivets
- Provides instant handling
- Ideal for dynamic loads

**Benefits of an adhesive solution**
- Ideal for weld-replacing static loads
- High strength allows use of smaller bond areas
- Quick cure time
- Repositionable
### Product Selection and Use:

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

### Warranty, Limited Remedy, and Disclaimer:

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M’s option, replacement of the 3M product or refund of the purchase price.

### Limitation of Liability:

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

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### 3M Product Description and Features

#### Powder Coat Masking

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<thead>
<tr>
<th>3M Product</th>
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<tbody>
<tr>
<td>3M™ Polyester Tape 8991†</td>
<td>▶ 1.0 mil polyester backing&lt;br&gt;▶ 1.4 mil silicone adhesive</td>
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<tr>
<td>3M™ Polyester Tape 8992†</td>
<td>▶ 2.0 mil polyester backing&lt;br&gt;▶ 1.2 mil silicone adhesive</td>
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<tr>
<td>3M™ Polyimide Tape 8997†</td>
<td>▶ 1.0 mil polyimide backing&lt;br&gt;▶ 1.4 mil silicone adhesive</td>
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<tr>
<td>3M™ Polyimide Tape 8998†</td>
<td>▶ 2.0 mil polyimide backing&lt;br&gt;▶ 1.2 mil silicone adhesive</td>
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†Also available in lined and log roll format

#### Pre-Powder Coat Bonding

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<tr>
<td>3M™ VHB™ Tape GPH</td>
<td>▶ High temperature resistance (150˚C continuous, 230˚C intermittent)</td>
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<tr>
<td>3M™ Scotch-Weld™ Structural Acrylic Adhesive DP8407NS</td>
<td>▶ High strength, high peel&lt;br&gt;▶ Bondline control 250μm&lt;br&gt;▶ Non-sag&lt;br&gt;▶ 6 minute work life*&lt;br&gt;▶ Time to handling strength 24 minutes*&lt;br&gt;▶ Heat and humidity resistant&lt;br&gt;▶ Maintains &gt;75% of initial strength after 1 hour at 400°F/204°C</td>
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#### Post-Powder Coat Bonding

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<td>3M™ VHB™ Tape 5952</td>
<td>▶ Adheres to painted and difficult-to-bond surfaces, usually without the need for special surface preparation, priming or abrading</td>
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<tr>
<td>3M™ Scotch-Weld™ Structural Acrylic Adhesives DP8805NS/DP8810NS</td>
<td>▶ Fast curing&lt;br&gt;▶ Bondline control 250μm&lt;br&gt;▶ High impact strength&lt;br&gt;▶ Non-sag&lt;br&gt;▶ 5 minute work life*/10 minute work life*&lt;br&gt;▶ Time to handling strength 7 minutes*/18 minutes*&lt;br&gt;▶ 20 minute structural strength*&lt;br&gt;▶ Low odor</td>
</tr>
<tr>
<td>3M™ Scotch-Weld™ Urethane Adhesives DP6310NS/DP6330NS</td>
<td>▶ High performing&lt;br&gt;▶ Best gap filling&lt;br&gt;▶ Low temperature flexibility</td>
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*All times quoted are approximate

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