

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™ Polyester Tapes 8991 & 8992 and 3M™ Polyimide Tapes 8997 & 8998 for Powder Coating

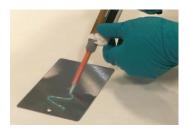


With pressure sensitive silicone adhesive, 3M™ Polyester Tapes 8991 and 8992 and 3M™ Polyimide Tapes 8997 and 8998 grab on contact for reliable masking in most powder coat painting



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



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

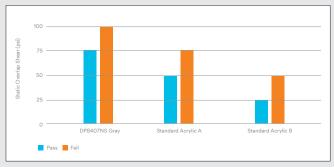
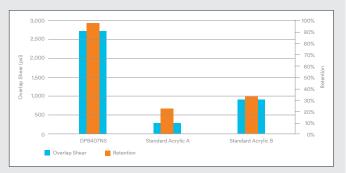


Chart shows the shear load (dead load in shear) that the adhesive can hold at 400°F (powder coat temperature). Blue bar: load held. Orange bar: load did not hold (fail). DP8407NS can hold a dead load in shear of 75 lbs during a powder coat cycle; but may fail at higher loads.

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

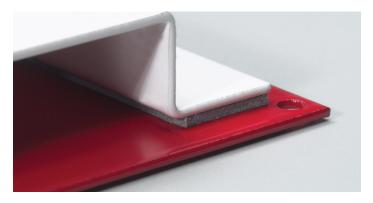


On abraded, cold rolled steel, DP8407NS shows high shear strength after exposure to 150°F and 80% relative humidity for 500 hours (accelerated outdoor weathering), whereas some competitive acrylics will lose strength due to steel corrosion accelerated by the adhesive.

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



Why choose a tape or adhesive?

Benefits of tape and adhesive bonding solutions

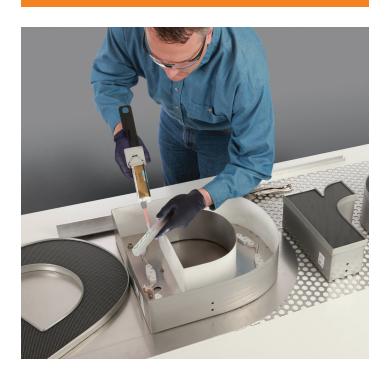
- Improves aesthetics
- Weight reduction
- Quick and easy application

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



	3M Product	Product Description and Features
	3M™ Polyester Tape 8991†	1.0 mil polyester backing1.4 mil silicone adhesive
Powder Coat Masking	3M™ Polyester Tape 8992†	2.0 mil polyester backing1.2 mil silicone adhesive
	3M™ Polyimide Tape 8997 [†]	1.0 mil polyimide backing1.4 mil silicone adhesive
[†] Also available in linered and log roll format	3M™ Polyimide Tape 8998†	2.0 mil polyimide backing1.2 mil silicone adhesive
Pre-Powder Coat Bonding	3M™ VHB™ Tape GPH	► High temperature resistance (150°C continuous, 230°C intermittent)
	3M [™] Scotch-Weld [™] Structural Acrylic Adhesive DP8407NS	 High strength, high peel Bondline control 250µm Non-sag 6 minute work life* Time to handling strength 24 minutes* Heat and humidity resistant Maintains >75% of initial strength after 1 hour at 400° F/204°C
Post-Powder Coat Bonding	3M™ VHB™ Tape 5952	Adheres to painted and difficult-to-bond surfaces, usually without the need for special surface preparation, priming or abrading
	3M™ Scotch-Weld™ Structural Acrylic Adhesives DP8805NS/DP8810NS	 Fast curing Bondline control 250µm High impact strength Non-sag 5 minute work life*/10 minute work life* Time to handling strength 7 minutes*/18 minutes* 20 minute structural strength* Low odor
	3M™ Scotch-Weld™ Urethane Adhesives DP6310NS/DP6330NS	High performingBest gap fillingLow temperature flexibility

^{*}All times quoted are approximate

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.

Industrial Adhesives & Tapes Division

3M Center Building 225-3S-06 St. Paul, MN 55144-1000 1-800-362-3550 www.3M.com/structuraladhesives

www.3m.com/vhb www.3m.com/iatd

