



# Scotch-Weld™ Low Odour Acrylic Adhesives DP8825NS Green

## Preliminary Product Data Sheet

Date: November 2016  
Supersedes: New

### Product Description

3M™ Scotch-Weld™ Low Odour Acrylic Adhesives are high performance, two-part acrylic adhesives with lower odour than most acrylic adhesives.

### Key Features

- Toughened
- Work life approximately 25 minutes
- Excellent shear strength
- Outstanding peel and impact strength
- 10:1 mix ratio
- Increased cure speed with applied heat
- Contain glass beads (250µ diameter) to control bond line thickness

#### Note:

Unless otherwise indicated, all properties measured at 22 °C.

### Physical Properties

	DP8825NS Green	
Colour	Base (B) Accelerator (A)	Off white Blue
Viscosity <sup>1</sup>	Base (B) Accelerator (A)	35000 mPas 15000 mPas
Density <sup>2</sup>	Base (B) Accelerator (A)	1.12 g/cm <sup>3</sup> 1.08 g/cm <sup>3</sup>
Mix ratio	By volume By weight	10 Parts B : 1 Part A 10 Parts B : 1 Part A
Note: Cure speed times are approximate and depend on adhesive temperature.		
Work life <sup>3</sup>		22-24 min
Open time <sup>4</sup>		20-22 min
Time to handling strength <sup>5</sup>		42-46 min
Time to structural strength <sup>6</sup>		50-56 min
Full cure time		24 hours

1. Viscosity measured using cone-and-plate viscometer; reported viscosity at 4 sec<sup>-1</sup> shear rate.

2. Density measured using pycnometer.

3. Maximum time that adhesive can remain in a static mixing nozzle and still be expelled without undue force on the applicator.

4. Maximum time allowed after applying adhesive to one substrate before bond must be closed and fixed in place.

5. Minimum time required to achieve 0.35 MPa of overlap shear strength.

6. Minimum time required to achieve 7.0 MPa of overlap shear strength.

**Typical Mixed  
Physical Properties**

Property	DP8825NS Green
Colour	Green
Full cure time	24 hours
Viscosity	35000 mPas
Density	1.12 g/cm <sup>3</sup>

**Typical Cured  
Physical Properties**

**Overlap Shear (MPa)<sup>7</sup>**

Substrate	DP8825NS Green
Aluminium	21,0 CF
Stainless steel	18,5 CF
PVC	9,6 SF
ABS	8,8 SF
Acrylic	7,1 SF
Polycarbonate	6,5 AF
Polystyrene	3,8 AF
Polyester (fiber-reinforced)	6,1 AF
Epoxy resin (fiber-reinforced)	18,8 CF
Aluminium (tested at 82°C)	4,9 CF

7. Overlap shear values measured using ASTM D1002; 1 min open time; adhesive allowed to cure for 24 hours at room temperature; 12.5mm overlap; 250 micron bond line thickness; samples pulled at 0.1 in/min for metals and 50mm/min for plastics; all surfaces prepared with light abrasion and solvent clean; substrates used were 1.5mm thick metals and 3mm thick plastics; failure modes:

AF: adhesive failure      CF: cohesive failure      SF: substrate failure

**Note:** Environmental aging tests have shown that these adhesives may accelerate the corrosion of certain metals (such as bare steel, copper, brass, and bronze), leading to low bond strength values and early bond failure. These adhesives also have relatively low adhesion to low surface energy plastics (such as polypropylene, polyethylene, TPO, and PTFE). Applications involving any of these materials should be carefully evaluated by the end user for suitability.

**Floating Roller Peel (N/mm width)<sup>8</sup>**

Substrate	DP8825NS Green
Aluminium	5,2 CF

8. Floating roller peel values measured using ASTM D3167; adhesives allowed to cure for 24 hours at room temperature; 25mm wide samples; 0.44mm bond line thickness; samples pulled at 150mm/min; aluminium surfaces etched; substrates used were 1.5mm thick and 0.5mm thick aluminium; failure modes:

AF: adhesive failure      CF: cohesive failure      SF: substrate failure

**Note:** The data in this sheet were generated using the 3M™ EPX™ Applicator System equipped with an EPX static mixer, according to manufacturer's directions. Thorough hand-mixing will afford comparable results.

**Environmental Resistance<sup>9</sup>**

Condition	Substrate	DP8410NS Green	
150 °C	Aluminium	100%	
50 °C + 80 % relative humidity		75%	
85 °C + 85 % relative humidity		30%	
Water		60%	
Salt water (5 wt % in water)		75%	
Diesel fuel		100%	
Motor oil		100%	
Antifreeze (50 wt % in water)		90%	
Isopropyl alcohol		65%	
Bleach (10 w t% in water)		75%	
50 °C + 80 % relative humidity		PVC	90%
Water			100%
Salt water (5 wt % in water)	100%		
Hydrochloric acid (16 w % in water)	100%		
Sodium hydroxide (10 wt % in water)	65%		

9. Values indicate overlap shear test performance retained after 1,000 hours of continuous exposure relative to a control sample left at room temperature; samples conditioned for 24 hours at room temperature and 50% relative humidity prior to tests; "NT" = not tested yet.

**Note:** Fully cured Acrylic Adhesives can withstand short-term incidental contact with almost any solvent, chemical, or environmental condition. However, long-term continuous exposure to the following liquids should be avoided:

Elevated temperature (>40°C) water  
Ketone-type solvents (acetone, MEK)

**Directions For Use**

1. To obtain the highest strength structural bonds, paint, oxide films, oils, dust, mould release agents, and all other surface contaminants must be completely removed. The amount of surface preparation depends on the required bond strength and environmental aging resistance desired by user. For suggested surface preparations on common substrates, see the section on surface preparation.

2. Mixing

**For Duo-Pak Cartridges**

Store cartridges with cap end up to allow any air bubbles to rise towards the tip. To use, simply insert the cartridge into the EPX applicator and start the plunger into the cylinders using light pressure on the trigger. Then remove the cap and expel a small amount of adhesive to ensure material flows freely from both sides of cartridge. For automatic mixing, attach an EPX mixing nozzle to the cartridge and begin dispensing the adhesive. For hand mixing, expel the desired amount of adhesive and mix thoroughly. Mix approximately 15 seconds after obtaining a uniform colour.

**For Bulk Containers**

Mix thoroughly by weight or volume in the proportion specified on the product label or in the typical uncured properties section. Mix approximately 15 seconds after obtaining a uniform colour.

3. Apply adhesive and join surfaces within the open time listed for the specific product. Larger quantities and/or higher temperatures will reduce this working time.

4. Allow adhesive to cure at 16 °C or above until completely firm. Applying heat up to 66 °C will increase cure speed.

5. Keep parts from moving during cure. Apply contact pressure or fixture in place if necessary. Optimum bond line thickness ranges from 0.1 to 0.5 mm ; shear strength will be maximized with thinner bond lines, while peel strength reaches a maximum with thicker bond lines.

6. Excess uncured adhesive can be cleaned up with ketone type solvents.\*

**\*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.**

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## Surface Preparation

3M™ Scotch-Weld™ Acrylic Adhesives are designed to be used on metal, wood and most plastic surfaces. The following cleaning methods are suggested for common surfaces:

### Steel:

1. Wipe free of dust and dirt with pure solvent such as acetone or isopropyl alcohol.\*
2. Sandblast or abrade using clean fine grit abrasives.
3. Wipe again with clean solvent to remove loose particles.\*
4. When using a primer, apply within 4 hours after surface preparation.

### Aluminium:

1. Wipe free of dust and dirt with pure solvent such as acetone or isopropyl alcohol.\*
2. Sandblast or abrade using clean fine grit abrasives.
3. Wipe again with clean solvent to remove loose particles.\*

### Plastics/Rubbers:

1. Wipe with isopropyl alcohol.\*
2. Abrade using fine grit abrasives.
3. Wipe with isopropyl alcohol.\*

### Glass:

1. Solvent wipe surface using acetone or MEK.\*
2. Apply a thin coating of a silane adhesion promoter to the glass surfaces to be bonded and allow to dry completely before bonding.

**\*Note: When using solvents, extinguish all ignition sources, including pilot lights, and follow the manufacturer's precautions and directions for use.**

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## Storage & Shelf Life

### Storage

Store at 16 °C - 25 °C and 40-65 % relative humidity in its original box.

The product can be stored up to 18 months after production.

**Note:** The shelf life may be shortened if the original packaging is not properly sealed or stored in an environment with high temperatures or humidity.

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**Precautionary Information**

Refer to product label and Material Safety Data Sheet for health and safety information before using the product.  
For information please contact your local 3M Office.  
[www.3M.com](http://www.3M.com)

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**For Additional Information**

To request additional product information or to arrange for sales assistance, call.....  
Address correspondence to: 3M

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**Important Notice**

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes. Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications. This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations

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