

3M Science.
Applied to Life.™



Bonding composite parts to multiple materials

3M™ Scotch-Weld™ Structural Adhesives

Bonding for the future

Solving the challenge of bonding composites and multiple materials.

Advantages of adhesives for composite and multi-material assembly

Designing with composites and multiple materials allows you to use thinner, lighter substrates to create products with improved flexibility and higher resistance to vibration and movement. Joining these parts within your assembly requires new methods of bonding beyond mechanical fasteners and welding, and recent advances in structural adhesives (such as epoxies, acrylics and urethanes) are enabling designers to create products that meet structural integrity requirements.

Structural adhesives are simply one of the most versatile and reliable solutions for joining composites and multi-materials. They offer application ease and convenience, and with faster throughput, adhesives can also help you meet higher production standards.

Adhesive performance advantages

- ▶ High performance strength, plus impact and energy absorption
- ▶ Maximum durability by distributing stress across the entire bonded area
- ▶ Excellent weather and chemical resistance
- ▶ Prevention of galvanic corrosion between dissimilar metals

- ▶ Bond Low Surface Energy (LSE) plastics, such as thermoplastic polyolefin (TPO), polypropylene (PP), and polyethylene (e.g. HDPE)
- ▶ Bond high performance composites, from carbon fibre to polyester sheet molding compound (SMC)
- ▶ Fast cure times for process improvement
- ▶ Many adhesive options with little to no surface preparation
- ▶ Manage thermal expansion and temperature resistance

Design advantages of adhesives

- ▶ Increased design flexibility
- ▶ Enhance aesthetics with cleaner bonded joints
- ▶ Lightweight, high strength seal with load distribution across the entire bonding area
- ▶ Bond multiple materials including plastics, metals, and composites
- ▶ Lower overall costs than traditional fastening methods



Structural adhesives – general characteristics

All structural adhesives provide at least 7MPa of overlap shear strength. Epoxy, acrylic and urethane adhesives feature the following specific properties.



Epoxy adhesives generally have the highest strength and overall performance. They also provide the best resistance to high temperatures, solvents and outdoor weathering. They adhere well to metals, ceramics, wood, and thermoset plastics, and usually require clean, abraded surfaces to obtain maximum bond strength.

Acrylic adhesives provide excellent bond strength and durability, although slightly lower than epoxy adhesives. However, they provide faster cure speed, higher tolerance for oily or unabraded bonding surfaces, and the ability to bond a wide variety of plastics and composites, as well as metals.

Urethane adhesives tend to have excellent impact resistance and good adhesion to most plastics and composites, as well as ceramics, metal and wood. They are relatively flexible when cured, making them a good choice for bonding materials with different coefficients of thermal expansion when temperature cycling is foreseen. They tend to have reduced strength at high temperatures.

Selecting the optimal adhesive solution

When selecting an adhesive, it's important to consult with a 3M application specialist. Preliminary adhesive selection can be done by matching end use requirements to the processing and performance characteristics of 3M structural adhesives. The key process factors to consider include:

Substrates

- ▶ What materials will be bonded?

Environment

- ▶ What are the expected conditions during end use: temperature, humidity, UV exposure?
- ▶ Is chemical resistance required: fluids (motor oil, gasoline, diesel fluid, jet fuel), cleaning solutions (weak acids and bases), specialised chemicals which may contact the bonded part?

Stress

- ▶ What types of joints are in the design – are there joint designs that put the adhesive bond under shear, tension, or compression forces?
- ▶ What are the mechanical challenges: impact, vibration, stress type and magnitude?

Production factors

- ▶ Do you require manual or automated application?
- ▶ Do you need fast or slow adhesives?
- ▶ Will the parts be dirty or clean?
- ▶ What are the cleanliness/environmental issues during production and end use: outgassing, ionics, corrosion potential, toxicity, disposal?

The specific answers to these questions will help determine which the most appropriate products to begin to test and evaluate for suitability of your end product and application.

3M™ Scotch-Weld™ structural adhesives selector guide

Choose your substrate combination and identify the recommended 3M™ Scotch-Weld™ structural adhesive options.

		Substrate 2					
		Metals - Aluminium - Cold rolled steel - Galvanised steel	Fibre-reinforced epoxy - Carbon fibre (CFRP) - Glass fibre	Fibre-reinforced thermosets - Polyester (FRP) - Phenolic - SMC	Thermoplastics - Polyolefin - PET	Other thermoplastics - Acrylic/PMMA - Polycarbonate (PC) - Rigid PVC and HIPS	Fibre-reinforced nylon
Substrate 1	Metals - Aluminium - Cold rolled steel - Galvanised steel	DP8825NS DP490 DP125	DP490 DP125 DP8825NS	DP125 DP8825NS DP190	DP8010 Blue	DP8410NS DP125 DP190	DP6310NS DP125 DP190
	Fibre-Reinforced Epoxy - Carbon fibre (CFRP) - Glass fibre		DP125 DP490 DP8825NS	DP6310NS DP8410NS DP125	DP8010 Blue	DP8410NS DP190 DP125	DP6310NS DP125 DP190
	Fibre-Reinforced Thermosets - Polyester (FRP) - Phenolic - SMC			DP8410NS DP125 DP190	DP8010 Blue	DP8410NS DP6310NS DP125	DP6310NS DP125 DP8410NS DP190
	Thermoplastics - Polyolefin - PET - HDPE				DP8010 Blue	DP8010 Blue	DP8010 Blue
	Other thermoplastics - Acrylic/PMMA - Polycarbonate (PC) - Rigid PVC and HIPS					DP8010 Blue	DP125 DP8410NS DP190 DP8010 Blue
	Fibre-reinforced nylon						DP125 DP8425NS DP190 DP6310NS

For more detailed selection options please visit our website [3M.nl/tapes](https://www.3m.nl/tapes) and [3M.nl/lijmen](https://www.3m.nl/lijmen), [3M.be/tapes](https://www.3m.be/tapes) and [3M.be/lijmen](https://www.3m.be/lijmen)

Multi-material composite bonding adhesive road map

Toughened epoxy DP490



- Excellent environmental resistance
- High impact strength
- Excellent fatigue performance
- 20 minute open time

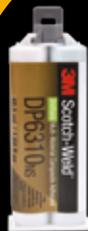
Toughness and flexibility

Flexible epoxy DP125



- Bonds to most substrates, including many plastics
- High strength and high peel
- 25 minute open time

NEW! Multi-material and composite adhesive DP6310NS



- Outstanding strength and performance
- Flexible to distribute load
- Little to no surface preparation
- 10 minute open time

Speed and toughness

Thermoplastics

Polyolefin bonding acrylic DP8010 BLUE



- Structural bonds to low surface energy plastics
- Medium viscosity
- 10 minute open time

Toughened acrylic DP8410NS



- MMA acrylic adhesive
- High impact resistance
- Minimal surface preparation
- Non-sag
- 10 minute open time

Low modulus adhesive sealant 760



- Reliable elastomeric adhesive sealant
- Will not degrade when exposed to UV
- Paintable when wet; low VOC
- 30 minute skin time

INCREASED IMPACT AND DURABILITY PERFORMANCE

INCREASED FLEXIBILITY

LSE BONDING

INCREASED SPEED

LARGE SURFACE BONDING

3M™ Scotch-Weld™ Structural Adhesive

Application and market examples

Transportation

– truck, bus, trailer, RV, emergency vehicles, vehicle interiors, high end automotive



Manufacturing of commercial buses, boats and specialty vehicles can utilise multiple bonding options to help withstand the loads applied to the panels during use, and to accommodate movement created by vibration and differential thermal expansion. 3M™ Structural Adhesives are used in many applications to build these vehicles.

Sporting goods

– golf clubs, tennis racquets, hockey sticks, recreational sporting equipment



Sporting goods was one of the first industries to utilise composite materials in the manufacturing of their products. Sports equipment needs to be very high performance, and the sporting goods industry has relied on 3M™ Structural Adhesives to take their design and performance to the next level.

General industry

– signage, pumps and tanks, electronics, construction, plus many more



The use of composite materials in all industries is growing. The proven reliability and benefits of these materials, along with the ability of adhesives to provide optimal bonding and assembly solutions, are making it easier than ever to work with composite materials. You can rely on 3M™ Structural Adhesives to bring your design to reality!

New



3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive

High performance

- ▶ Outstanding structural strength
- ▶ Durable life long bonds
- ▶ Flexible to distribute load
- ▶ Excellent in most environments

Productivity

- ▶ Fast time to handling strength and cures
- ▶ Little to no surface preparation – unique for a urethane adhesive
- ▶ Various open times to meet your needs
- ▶ Easy to dispense and control, 1:1 mix ratio – eliminate mixing failures!

Versatility

- ▶ Bonds multiple materials – ideal for metal to composites
- ▶ Bonds metals, plastics and composites
- ▶ Now you can use one adhesive for multiple applications

Savings

- ▶ Cheaper than traditional fastening methods like welding, nuts and bolts
- ▶ Speed = cost savings!
- ▶ Quality at the right price – eliminate your product failures



Specifications

Product	Colour	Mix ration volume B:A	Open time	Handling strength in minutes	Flow behaviour	Tensile strength in MPa	Elongation %
DP6310NS	Green	1:1	10	45	Non-sag	34.9	8%
DP6330NS	Green	1:1	30	120	Non-sag	27.9	69%

Applicators and accessories

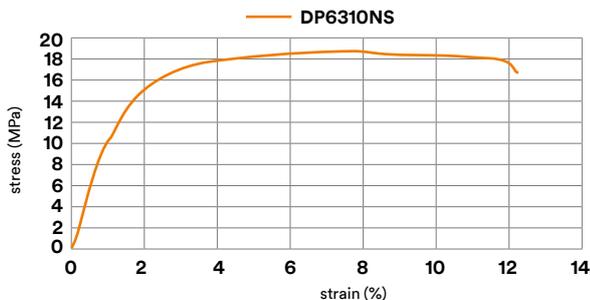
Cartridge size	Product description	Part Number	Code	Picture
45 ml, 48.5 ml and 50 ml cartridges	Manual applicator (1:1/2:1)	EPXG50	7000033012	
	Plunger (1:1/2:1)	EPXPL21	7000006768	
	Plunger (10:1)	EPXPL45	7000062909	
	Mixing nozzle (1:1/2:1)	EPXN48	7100104991	
	Mixing nozzle (10:1)	EPXN45	7000062907	
50 ml	Quadro nozzle (1:1/2:1)	EPXNQUAD	7000033011	
400 ml cartridge	Pneumatic applicator (1:1/2:1)	EPXG400	7000110542	
	Mixing nozzle square (1:1)	EPXN400N	7000028616	
490 ml cartridge	Pneumatic applicator (10:1)	EPXG490	7000062908	
	Mixing nozzle square (10:1)	EPXN490	7100015959	

3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive DP6310/DP6330NS



3M™ Scotch-Weld™ Multi-Material Composite Urethane Adhesive DP6310NS/DP6330NS is a two-part urethane adhesive that is used to bond most types of composites, metals and multiple materials together. DP6310NS is fast drying, with a 10-minute work time. DP6330NS allows a longer handling time of 30 minutes. It is designed to bond multiple applications and is ideal for bonding composites.

- ▶ high performance, two-component urethane adhesive
- ▶ Along with metals, bonds SMC and FRP (traditional fiberglass) materials to each other and to metal frames
- ▶ Easy dispensing system



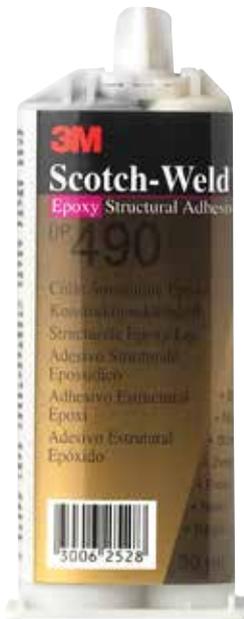
	DP6310NS	DP6330NS
Mix Ratio (Volume) B:A	1:1	1:1
Approximate Viscosity (mPa·s) 24°C	20,000	20,000
Approximate Mixed Work Life 24°C	10 minutes	30 minutes
Approximate Time to Handling Strength 24°C	45 minutes	2 hours
Floating Roller Peel (N/mm) 24°C	3.5	3.5
Overlap Shear Aluminium (MPa) -55°C	24.1	24.8
Overlap Shear Aluminium (MPa) 24°C	24.8	24.8
Overlap Shear Aluminium (MPa) 82°C	6.2	6.9
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	22.1 AF	23.2 SF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	16.6 CF	20.7 SF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	6.2 AF	6.9 SF

KEY: SF - Substrate Failure / CF - Cohesive Failure / AF - Adhesive Failure

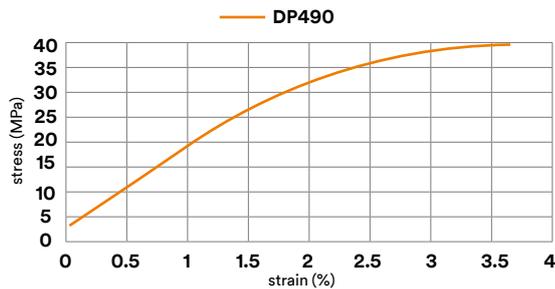
*Aluminium was acid etched before bonding.

*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ EPX™ Epoxy Adhesive DP490



3M™ Scotch-Weld™ EPX™ Epoxy Adhesive DP490 is a black, thixotropic, gap-filling, two-component epoxy adhesive with particularly good application characteristics. It is designed for use where toughness and high strength are required. Features include high temperature resistance up to 120°C, high resistance to impact, and outstanding stability under static and dynamic loads. Very good strength and aging characteristics.



	DP490
Mix Ratio (Volume) B:A	2:1
Approximate Viscosity (mPa·s) 24°C	180,000
Approximate Mixed Work Life 24°C	180 minutes
Approximate Time to Handling Strength 24°C	4 to 6 hours
Floating Roller Peel (N/mm) 24°C	4.4
Overlap Shear Aluminium (MPa) -55°C	31
Overlap Shear Aluminium (MPa) 24°C	28
Overlap Shear Aluminium (MPa) 82°C	13
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	27 SF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	23 SF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	7 SF

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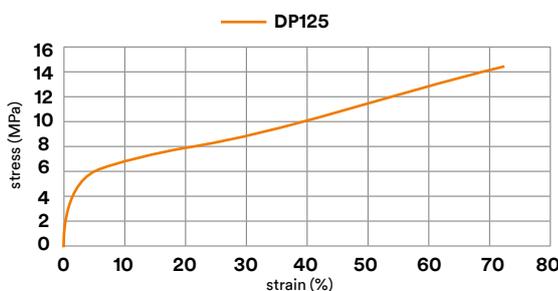
*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Epoxy Adhesive DP125 Grey



3M™ Scotch-Weld™ Epoxy Adhesive DP125 is a low odour, two-part epoxy that creates strong structural and flexible bonds on metal, ceramics, wood and many plastics. It provides the reliability and strength needed to maintain productive, cost effective results. Available in grey or translucent.

- ▶ Flexible for higher peel strength and better vibration resistance
- ▶ Maintains a strong bond under expansion, contraction and limited movement
- ▶ Medium viscosity helps minimise running, dripping or migration
- ▶ Flows smoothly for controlled dispensing
- ▶ Effective adhesive system for bonding, joining, gluing, attaching, assembling, encapsulating, potting, and sealing applications



	DP125 Grey
Mix Ratio (Volume) B:A	1:1
Approximate Viscosity (mPa·s) 24°C	52,500
Approximate Mixed Work Life 24°C	25 minutes
Approximate Time to Handling Strength 24°C	2.5 hours
Floating Roller Peel (N/mm) 24°C	15.8
Overlap Shear Aluminium (MPa) -55°C	23
Overlap Shear Aluminium (MPa) 24°C	30
Overlap Shear Aluminium (MPa) 82°C	3
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	31 SF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	20 CF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	7 AF

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*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Epoxy Adhesive DP190 Grey

3M™ Scotch-Weld™ Epoxy Adhesive DP190 is a two-part epoxy adhesive that delivers exceptional performance with high shear and peel strength.

Extremely compatible, this epoxy adhesive bonds to a wide range of materials, including metals, ceramics, wood, fibreboard, glass, rubber and many plastics. Available in grey or translucent.

- ▶ Provides tough, strong bonds with high shear and peel strength
- ▶ Capable of bonding to a wide variety of different materials
- ▶ Delivers extended work life, providing additional time for adjustment
- ▶ Formulated with low viscosity for easy dispensing



	DP190 Grey
Mix Ratio (Volume) B:A	1:1
Approximate Viscosity (mPa·s) 24°C	80,000
Approximate Mixed Work Life 24°C	90 minutes
Approximate Time to Handling Strength 24°C	10 hours
Floating Roller Peel (N/mm) 24°C	8.8
Overlap Shear Aluminium (MPa) -55°C	10
Overlap Shear Aluminium (MPa) 24°C	17
Overlap Shear Aluminium (MPa) 82°C	3
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	15 CF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	18 CF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	10 SF

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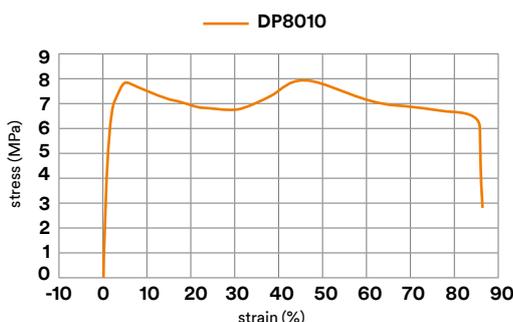
*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Structural Plastic Adhesive DP8010 Blue



3M™ Scotch-Weld™ Structural Plastic Adhesive DP8010 is a two-part, acrylic-based adhesive specially formulated to bond many low surface energy plastics, including many grades of polypropylene, polyethylene and thermoplastic elastomers (TPEs) without special surface preparation.

- ▶ Creates a strong bond on low surface energy plastics with minimal or no prep required
- ▶ Resists many chemicals, water, humidity, and corrosion
- ▶ Medium viscosity allows controlled dispensing
- ▶ Formulated to bond dissimilar substrates for multiple uses in the same application
- ▶ Strong adhesive can replace screws, rivets, plastic welding, and two step processes



	DP8010 Blue
Mix Ratio (Volume) B:A	10:1
Approximate Viscosity (mPa·s) 24°C	20,000
Approximate Mixed Work Life 24°C	10 minutes
Approximate Time to Handling Strength 24°C	1 hour
Floating Roller Peel (N/mm) 24°C	2.5
Overlap Shear Aluminium (MPa) -55°C	19
Overlap Shear Aluminium (MPa) 24°C	19
Overlap Shear Aluminium (MPa) 82°C	3
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	17 CF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	17 CF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	7 SF

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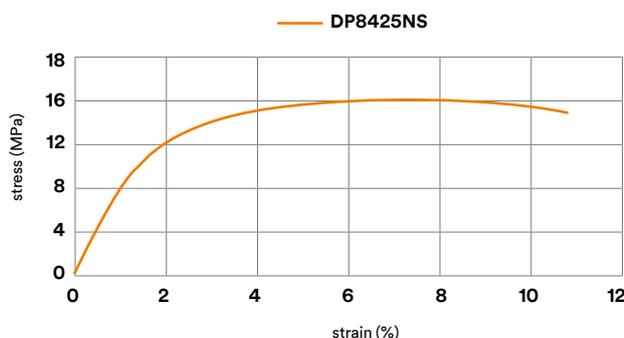
*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Acrylic Adhesive DP8410NS



3M™ Scotch-Weld™ Acrylic Adhesive DP8410NS is a non-sag, toughed, two-part acrylic adhesive. It provides improved adhesion to many plastics and metals, including those with slightly oily surfaces. It's a durable adhesive that features a fast rate of strength build to provide structural strength in just minutes.

- ▶ Durable finished bond with excellent shear and high impact strength
- ▶ Bonds difficult surfaces such as powder coats and oily surfaces
- ▶ Fast adhesion reduces waiting and maximises work efficiency
- ▶ High strength, easy plastic bonding
- ▶ Glass bead technology to control bond line thickness and produce consistent quality



	DP8410NS
Mix Ratio (Volume) B:A	10:1
Approximate Viscosity (mPa·s) 24°C	70,000
Approximate Mixed Work Life 24°C	10 minutes
Approximate Time to Handling Strength 24°C	20 minutes
Floating Roller Peel (N/mm) 24°C	5.3
Overlap Shear Aluminium (MPa) -55°C	N/A
Overlap Shear Aluminium (MPa) 24°C	25
Overlap Shear Aluminium (MPa) 82°C	6
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	32 CF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	19 AF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	9 SF

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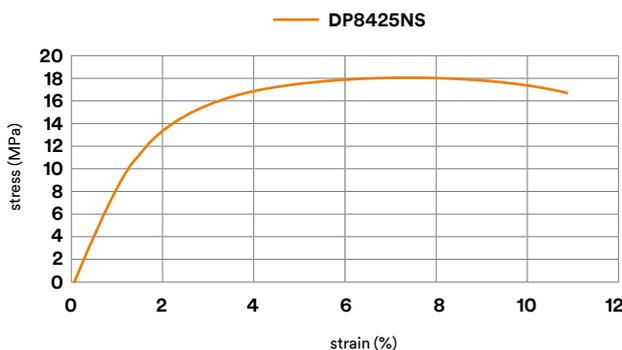
*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Acrylic Adhesive DP8425NS



3M™ Scotch-Weld™ Acrylic Adhesive DP8425NS is a green, two-part, non-sag, toughened, MMA-based adhesive.

10:1 mix ratio, 25-minute work life and handling strength in approximately 25 minutes.



	DP8425NS
Mix Ratio (Volume) B:A	10:1
Approximate Viscosity (mPa·s) 24°C	70,000
Approximate Mixed Work Life 24°C	25 minutes
Approximate Time to Handling Strength 24°C	50 minutes
Floating Roller Peel (N/mm) 24°C	8.8
Overlap Shear Aluminium (MPa) -55°C	N/A
Overlap Shear Aluminium (MPa) 24°C	26
Overlap Shear Aluminium (MPa) 82°C	6
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	N/A
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	21 AF/CF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	9 SF

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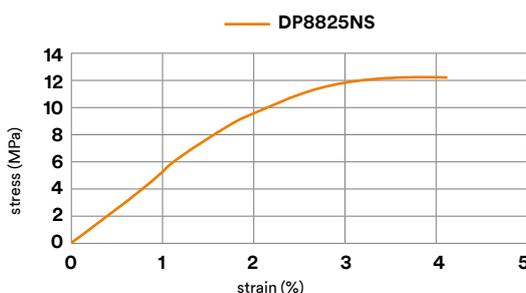
*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

3M™ Scotch-Weld™ Low Odour Acrylic Adhesive DP8825NS



3M™ Scotch-Weld™ Low Odour Acrylic Adhesive 8825NS is our standard low-odour, non-sag, toughened, two-part acrylic adhesive. This adhesive is an ideal choice for a wide variety of industrial and commercial applications since it cures twice as fast as most other competitive acrylic adhesives.

- ▶ Durable finished bond with excellent shear and high impact strength
- ▶ Low odour and non-flammable properties for a safer working environment compared to typical acrylic adhesives
- ▶ Bonds difficult surfaces such as powder coats and oily surfaces
- ▶ Fast adhesion and drying time reduces waiting and maximises work efficiency
- ▶ Features glass shimming beads to control bond line thickness to prevent excessive squeeze out



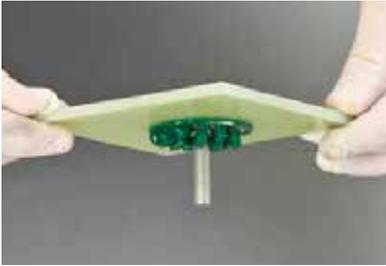
	DP8825NS
Mix Ratio (Volume) B:A	10:1
Approximate Viscosity (mPa·s) 24°C	80,000
Approximate Mixed Work Life 24°C	25 minutes
Approximate Time to Handling Strength 24°C	50 minutes
Floating Roller Peel (N/mm) 24°C	3.5
Overlap Shear Aluminium (MPa) -55°C	N/A
Overlap Shear Aluminium (MPa) 24°C	22
Overlap Shear Aluminium (MPa) 82°C	6
Overlap Shear Carbon Fibre - reinforced Epoxy (MPa) 24°C	19 CF
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	15 AF
Overlap Shear Sheet Molding Compound (SMC) (MPa) 24°C	7 SF

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*Composite materials were prepped with an IPA wipe/abrade/IPA wipe surface preparation method.

Specialty: 3M™ Scotch-Weld™ Hybrid Epoxy/Acrylate Structural Adhesive 7271 B/A



3M™ Scotch-Weld™ Epoxy Structural Adhesive 7271 B/A is a two-part, 1:1 mix ratio. The hybrid chemistry of this epoxy/acrylate structural adhesive with a 22 minutes work life, exhibits excellent shear and tensile strengths along with high temperature performance and durability. Its high viscosity allows for gap filling and non-sag applications such as vertical and horizontal application of big heads. 3M™ Scotch-Weld™ Epoxy Structural Adhesive 7271 B/A contains glass beads for perfect control of minimal bond line thickness.

- ▶ Fast curing
- ▶ High gap-filling
- ▶ Bonding multiple substrates (non thermoplastics)
- ▶ No irritating smell
- ▶ Minimal surface preparation

	7271 B/A
Mix Ratio (Volume) B:A	1:1
Approximate Viscosity (mPa·s) 24°C	160,000
Approximate Mixed Work Life 24°C	22 minutes
Approximate Time to Handling Strength 24°C	60 minutes
Floating Roller Peel (N/mm) 24°C	2.7
Overlap Shear Aluminium (MPa) -55°C	24.8
Overlap Shear Aluminium (MPa) 24°C	21.9
Overlap Shear Aluminium (MPa) 82°C	6.5
Overlap Shear Glass Fibre - reinforced Epoxy (MPa) 24°C	13 SF

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3M™ Hybrid Adhesive Sealant 760



3M™ Hybrid Adhesive Sealant 760 is a one component sealant without isocyanates which forms permanent elastic bonds. It cures rapidly under the effect of atmospheric humidity to form a flexible and resistant joint with very good adhesion on most materials.

Can also be used for bonding and caulking different materials used in the building industry: concrete, wood, aluminium, most lacquered metals, polyester, glass, concrete, brick, stone, ceramic, etc.

The product has good resistance to UV aging and will retain strength and flexibility over long-term exposure to UV light. The white product may show some yellowing with long term exposure to UV light.

	3M Hybrid Sealant 760
Skin formation time (min) (ISO 291, 23oC, 50% RH)	20min + 10min
Cure time, mm/24hr (ISO 291, 23oC, 50% RH)	3mm / 24h
Shore A Hardness (ISO 868-3 seconds)	Approx 55
Density (g/ml)	White and grey : 1,62 + 0,05 Black : 1,57 + 0,05
Elongation at break (ISO 37)	>300%
Modulus at 100%	>1MPa
Modulus at break	>1.8 MPa
Tensile strength at 100% elongation (ISO 8339)	0.62 MPa



3M Composite and Multi-Material Solution Centre

Finding the right science to match your application is key. 3M is here to help, bringing over 60 years of proven adhesive science leadership to composite bonding applications, and offering the expertise to apply them to the right materials for an unmatched bond quality. From the rugged strength of the first composite golf club to applying a powerful hold to aeroplane wings, 3M has brought the industry new solutions, making adhesive science what it is today, with progressive products formulated to solve the manufacturing challenges of the future.

Your next design starts here!

It's time to design with new materials and enhance your process efficiencies – with the help of 3M adhesives and the support of the 3M team. We offer technical service and testing to help you maximise your product designs. 3M is your go-to resource for application and adhesive expertise! Wherever you are in the process, we can help guide you with the advice and information you need.

What's your challenge? Solve it with a smarter bond.

For more information, speak with a 3M representative or visit 3M.nl/tapes and 3M.nl/lijmen, 3M.be/tapes and 3M.be/lijmen



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