



Scotch-Weld™

Epoxy Adhesive 7260 B/A

Product Data Sheet

Updated : December 2001

Supersedes : October 2000

Product Description

3M Scotch-Weld™ 7260 B/A epoxy adhesive is a high performance, two-part toughened adhesive.

Possesses high shear and peel adhesion with very high levels of durability.

Excellent adhesion to metallic surfaces and thermosets. Good adhesion to many thermoplastics

Physical Properties

Not for Specification Purposes

	BASE	ACCELERATOR
Base	Toughened Epoxy	Modified Amine
Colour	Black	Off-white
Specific Gravity (approx.)	1.30-1.36	1.25-1.31
Mix Ratio		
By	100	50
Volume	100	45
By		
Weight		
Viscosity (Pa.s at 23°C)	~115	~490
Worklife at 23°C (Hours)		
10 g	4-6	
20 g	4-6	
Time to Handling Strength at 23°C (Hours)	24	
Shelf Life	18 months from date of dispatch by 3M when stored in the original carton at 21 °C and 50% relative humidity.	

Typical Performance Characteristics

Not for specification purposes

Overlap Shear Strength (MPa)

Test method EN 2243-1

Test conditions	Cure cycle 1	Cure cycle 2	Cure cycle 3
- 55 ± 3°C	NT	27.7 (C)	27.2 (C)
-40 ± 2°C	28.6 (C)	30.9 (C)	28.9 (C)
23 ± 2°C	33.5 (C)	35.5 (C)	36.6 (C)
70 ± 2°C	13.7 (C)	14.3 (C)	14.5 (C)
100 ± 2°C	6.3 (C)	7.0 (C)	6.7 (C)
120 ± 3°C	3.6 (C)	3.6 (C)	3.2 (C)
150 ± 3°C	3.0 (C)	2.9 (C)	2.4 (C)

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Overlap shear specimens were constructed using 1.6 mm thick 2024 T3 clad aluminium with the surface prepared using the optimised FPL etch.

Typical Performance Characteristics(Cont'd) **Roller (Bell) Peel Strength (N/25mm)** **Test method EN 2243-2**
 Not for specification purposes

Cure cycle 1	Cure cycle 2	Cure cycle 3
130	154	140

Roller (Bell) peel specimens were constructed using 1.6 and 0.5 mm thick 2024 T3 clad aluminium with the surface prepared using the optimised FPL etch

Cure cycles :

1. 28 days at $23 \pm 2^\circ\text{C}$ under a pressure of 100 kPa the first 24 hours
2. 24 hours at $35 \pm 2^\circ\text{C}$ under a pressure of 100 kPa
3. 180 min at $60-65^\circ\text{C}$ under a pressure of 100 kPa.

~300 μm diameter glass beads were used to control glue line thickness

Environmental Resistance **Overlap shear strength (MPa)** **Test method EN 2243-1**
 Not for specification purposes

Table denotes typical results obtained on 1.6 mm thick optimised FPL etched 2024 T3 bare aluminium after curing for 24 hours at 35°C . Testing was conducted at $23 \pm 2^\circ\text{C}$.

Conditions	Test results
Control (23°C / 50% RH)	36.4 (Cohesive)
750 hours dry heat (80°C)	32.8 (Cohesive)
750 hours D.I. water at 23°C	34.6 (Cohesive)
750 hours Jet fuel at 23°C	35.3 (Cohesive)
750 hours diesel fuel at 23°C	34.9 (Cohesive)
750 hours hydraulic oil at 23°C	35.1 (Cohesive)
750 hours 70°C ; $\geq 95\%$ relative humidity	31.2 (Cohesive)
70°C wet cataplasmic	
-7 days	33.1 (Cohesive)
-14 days	32.7 (Cohesive)
5 % salt spray at 35°C	
-500 hours	33.1 (Cohesive)*
-750 hours	34.0 (Cohesive)*
-1000 hours	32.9 (Cohesive)*

*Denotes no corrosion under the glue line

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Impact (shear) resistance

Not for specification purposes

The following results show the typical data range obtained using an Izod pendulum impact device according to modified EN 29653/ISO 9653 test method. Samples were cured at 35°C for 24 hours with glass beads being used to control the glue line (~300 µm)

Test Conditions	FPL Etched 2024 T3 Clad AA	Degreased 2333-02 stainless steel
- 40 ± 3°C	20.8 kJ / m ²	29.6 kJ / m ²
23 ± 2°C	29.6 kJ / m ²	39.7 kJ / m ²
70 ± 2°C	34.3 kJ / m ²	39.2 kJ / m ²

Adhesion Properties

Not for specification purposes

Overlap Shear Strength (MPa)

Test method EN 2243-1

Typical results obtained using overlap shear specimens prepared according to EN 2243-1. All specimens were cured for 24 hours at 35 °C under a pressure of 100 kPa.

Substrate	Overlap shear strength / MPa	Failure Mode
2024 T3 clad aluminium	29.9	Cohesive
6063 T6 aluminium alloy	22.4	Cohesive
5754 H111 aluminium alloy	12.5	Substrate failure (stretching)
Cold rolled steel	16.9	Substrate failure (stretching)
Stainless steel	33.9	Cohesive
Hot dip galvanised steel	35.0	Cohesive
Carbon fibre reinforced epoxy	28.2	Substrate failure (delamination)
Glass fibre reinforced phenolic	17.2	Substrate failure (delamination)
Glass fibre reinforced polyester	5.9	Substrate failure

Shear stress/strain – G Modulus

Thick adherend shear specimens were made according to test method EN 2243-6/DIN 54451 using 6mm thick 2024 T3 aluminium with the surface treated by the optimised FPL etch. Curing was effected for 24 hours at 35 +/-3°C under 100 kPa and 120 minutes at 65 +/- 3 °C under 100 kPa (~300 µm glue line control).

	35 °C cure	65 °C cure
Shear Strength / MPa	40.5	42.8
Strain (max)	0.6	0.6
Shear Modulus, G (MPa)	254	269

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Additional Product Information	Work Life: After mixing, the mixture remains workable for a time before it becomes too viscous to properly wet the surface to which it is applied.	The work life and rate of cure are both greatly affected by temperature and to some extent humidity, curing faster as temperature and humidity are raised.	Once mixed, the adhesive should be used within 4-6 hours.
	Equipment : 3M Scotch-Weld™ 7260 B/A is supplied either in a dual syringe plastic cartridge designed to fit the EPX™ applicator system or via bulk packaging formats.	Contact your 3M representative for assistance in selecting application equipment to suit your specific needs.	
	Clean Up: Excess adhesive can be cleaned up prior to curing with 3M Solvent No.2.	Note: 3M Solvent No.2 is flammable. When using solvents for clean up it is	essential that the correct safety precautions are observed.
Surface Preparation	For high strength structural bonds, paint, oxide films, oils, dust and all other surface contaminants	Must be completely removed. The level of surface preparation will depend on the required	bond strength and environmental resistance required.
Storage Conditions	Rotate stock on a "first in - first out" basis. When stored at room temperature in the original packaging, shelf life is 18 months.		
Additional Information	For any additional information please contact your local 3M representative		

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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.



Tapes & Adhesives

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