



Scotch-Weld™

EPX™ Adhesive DP125

Product Data Sheet

Updated : March 1996
Supersedes : November 1993

Product Description

This is a flexible structural adhesive with especially good adhesion to a wide range of industrial materials including metals and reinforced plastics. The performance characteristics of this product are similar to the slower curing 3M Scotch-Weld DP190 which has found widespread acceptance in industrial bonding applications.

After application from the cartridge, the product has a useful work life before contact with the second surface of approximately 25 minutes which makes it suitable for medium to large constructions; while still giving the benefit of rapid handling strength (approximately 2.5 hours).

Performance is characterised by a combination of high Peel and Shear strength.

Physical Properties

Not for specification purposes

	BASE	ACCELERATOR
	Epoxy	Amine
Specific Gravity	1.25	1.01
Viscosity at 27°C (cP)	50,000	55,000
Mix Ratio	By Weight 1.2 By Volume 1.0	1.0 1.0
Colour	Grey	Amber
Work Life	25 minutes approximately for bead application through mixer.	
Handling Strength	2.5 hours approximately.	
Full Strength	24 hours (test full performance at one week)	
Shelf Life	12 months from date of despatch by 3M when stored in the original carton at 21°C (70°F) & 50 % Relative Humidity	

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Performance Characteristics

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Overlap Shear Strength

Bonds aged 24 hours at RT plus 2 hours at 70°C.

Shear strength to BS5350 Part C5. Peel strength to BS5350 Part C9.

Substrate	Shear Strength (N/mm ²)
Etched Aluminium	24.0
Sanded Aluminium (60 Grit)	15.4
Cold Rolled Steel	13.4
Wood (Pine)	6.3
Glass, Borosilicate	2.8
Glass +3M 3901 Primer	1.7
Polycarbonate	6.2
Acrylic	3.8
GRP	12.6
ABS	3.6
PVC	5.3
Polypropylene	0.4

Temperature Performance in Shear and Peel.

(Etched Aluminium)

Temperature (°C)	Shear Strength (N/mm ²)	Peel Strength DaN/cm
-55	23.9	0.53
21	30.2	6.25
49	4.9	3.21
65	3.2	0.53
82	2.8	0.35

Storage Conditions

Store product at 15°C to 25°C for maximum storage life.

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Directions for Use	Place the cartridge into the 3M EPX Applicator and clip into position. Remove the resealable cap. Expel a small quantity of adhesive and ensure both components flow freely. Attach correct mixer nozzle (this should have 20 or more elements). Dispense the adhesive as required. When finished either leave the nozzle in place and store, or remove the nozzle, wipe clean the tip, and replace cap. To re-start after storage remove the old nozzle with cured adhesive and re-fit a new nozzle, or remove the cap and fit a new nozzle.	Surface Preparation: The degree of surface preparation depends on the bond strength required and the environment likely to be encountered by the bonded structure. For most plastics solvent wiping with 3M VHB surface cleaner, followed by abrasion with 3M Scotchbrite 7447, followed by a further solvent wipe until clean, will give good performance (except for acetal, polyethylene and polypropylene and some other low surface energy materials). This also applies to powder coat paints and other stoved paint systems. The same surface preparation will also give good adhesion to metal surfaces. The objective is to remove loosely attached surface films such as oils, waxes, dusts, mill-scale, loose paints and all other	surface contaminants in addition to enhancing mechanical adhesion. Grit-blasting using a clean, fine grit also offers excellent adhesion on many metallic substrates. Where humid environments are likely to be encountered by metallic substrates we recommend additional priming with 3M Scotch-Weld 1945B/A or 3M Scotch-Weld 3901. Alternatively, chemical conversion coating techniques combined with priming can offer the best durability. 3M Scotch-Weld 1945B/A is best used with flexible adhesives, it also provides a protective anti-corrosion coating. 3M Scotch-Weld 3901 can be used in conjunction with both flexible and toughened adhesives and it improves specific adhesion. 3M Scotch-Weld 3901 is also an excellent glass primer.
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Clean Up	Clean-Up: Excess uncured adhesive can be removed with the following solvents: 3M VHB Surface Cleaner (mild alcohol based cleaner) 3M Scotch-Grip Solvent No2. (Ketone blend) 3M Industrial Cleaner (Aerosol).
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Additional Product Information	Please contact your 3M Salesperson for additional information on the preparation of difficult surfaces, or likely exposure to aggressive environments.
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Health & Safety Information

Precautions:

Causes severe eye irritation, may cause permanent eye damage. Irritating to skin. May cause sensitisation by skin contact. Avoid contact with the skin and eyes. Wear suitable gloves and eye/face protection.

Launder contaminated clothing before re-use. Avoid prolonged breathing of vapours. Avoid inhalation of dust when grinding or cutting cured material.

First Aid:

Eye Contact: Immediately flush eyes with copious amounts of water for at least 15 minutes, holding eyes open. Call a physician.

Skin Contact: Wash immediately with plenty of soap and water.

For further information please contact the Toxicology Department at the Bracknell Head Office on (0344) 858000.

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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.



Specialty Tapes & Adhesives

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