

# D311 EPOXY ADHESIVE SLOW CURE

## PRODUCT DESCRIPTION

**D311 EPOXY ADHESIVE SLOW CURE** is a 1:1, solvent free, adhesive designed to bond or repair most materials such as wood, metal, glass, ceramic, plastics and rubbers. It is rapid setting, opaque paste which gives a cured product with a high bond strength and good chemical resistance.

## AREAS OF USE

Permanent bonding to a wide variety of materials such as aluminium, copper, steel brass, concrete, stone, wood, glass, plastics, ceramics, galvanised metals and rigid plastics etc. Can be used in external environments due to its excellent chemical and temperature resistance.

## PROPERTIES

Supplied in a newly developed 1:1 mixing ratio cartridge which is used with a static mixer nozzle (D313) and cartridge gun (D312) or manual plunger applicator (D360). Once extruded the product has a working life of 30 minutes with an adhesive set time of approximately 4 hours. Giving a permanent and secure bond or repair, the product cures to give near clear bond line which will withstand vibrations and exhibits excellent load bearing properties.

## DIRECTIONS FOR USE

Surfaces must be clean, dry and free from all traces of grease, oil, wax and dust. The bond faces are best treated with a cleaning agent such as D406 Surface Preparation Cleaner or D513 Cleaning Wipes.

D311 should be applied directly onto the surface to be bonded. Once the two surfaces have been brought together slightly rotate the items to ensure that all the air is eliminated and that both surfaces are fully wetted out. Load bearing bonds should be supported until full cure is achieved. An adhesive thickness of 0.005inches or 0.15mm provides the maximum bond strength.

TECHNICAL DATA	UNCURED ADHESIVE	
	MIXED VISCOSITY @ 25°C	15,000 - 20,000 PaS
	MIXING RATIO	1:1 vol/vol or wt/wt
	MIXED COLOUR	Clear
	WORKING LIFE	30 minutes (temperature dependent)
	SPECIFIC GRAVITY	1.1
	PERCENTAGE SOLID	100%
	ADHESIVE SET-UP TIME	240 minutes (temperature dependent)
	SHELF LIFE	12 months when stored in unopened packaging @ +5 to +25°C

TECHNICAL DATA	CURED PROPERTIES	
	SHORE HARDNESS D (ASTM D 2240)	78-80
	SHEAR STRENGTH (N/mm <sup>2</sup> ) (DIN 53283)	14-18
	PEEL STRENGTH (ISO 4578)	3-5
	THERMAL CONDUCTIVITY (W/mK)	0.1
	COEFFICIENT OF THERMAL EXPANSION (1/K)	60 - 12 X 10 E <sup>-6</sup>
	DIELECTRIC STRENGTH (Kv/mm)	50 - 90
	VOLUME RESISTIVITY (OHM/cm)	3 - 5 x 10 E <sup>12</sup>
	SERVICE TEMPERATURE RANGE	-40°C to +90°C

CHEMICAL RESISTANCE DATA	The chemical resistance of D311 was studied by bonding aluminium/aluminium as per specification and cured for 7 days @ 25°C then kept immersed in the media listed here and tested for lap shear strength. Effect of immersion in different media. (Immersion for 7 days in various media.)	
	MEDIA	LAP SHEAR (ASTM D 1002) STRENGTH IN PSI
	PETROL	2550
	ACETIC ACID (10%)	2180
	XYLENE	2165
	LUBRICATING OIL-HD30	2400
	PARAFFIN	2275
	WATER@23°C	2355
	WATER@90°C	2325

**HEALTH AND SAFETY** • Refer to the relevant Material Safety Data Sheet (MSDS).

**PACKAGING** • Available in 50ml 1:1 ratio cartridge. Other packs available on request.

**LEGAL NOTICE**

The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the responsibility of the customer to determine the products suitability for use. Delta Adhesives Limited accepts no liability arising out of the use of this information or the product described herein.

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