

## Three Bond 2086M

### Two-component Epoxy Resin

### Quick Setting Type

#### 1. Outline

Three Bond 2086M consists of two-component epoxy resin and hardener which is designed for fast fixturing and bonding of a wide range of materials. Handleable bonds are achieved in as little as 5 minutes whilst full properties can be attained in 30 minutes at room temperature. Compared with standard types TB2086M has improved low temperature curing characteristics, higher impact resistance and excellent workability due to its low viscosity.

#### 2. Features

- Extremely simple application as the product is packaged in 50ml cartridges for use with manual or pneumatically operated application guns, or tubes for manual mixing.
- Rapid setting within minutes at room temperature.
- Low viscosity mixed resin with excellent flowability.
- Transparent when mixed for cosmetically sensitive parts.
- The cured resin excels in electric properties as well as mechanical strength and very good chemical resistance.

#### 3. Applications

- Bonds a wide range of materials including metals, engineered plastics, ceramics, stone, wood, FRP and rubbers (not suitable for polyethylene, polypropylene or fluororesins).
- Fast bonding type. Parts are fixtured within minutes and set in as little as 30 minutes.
- Usable even at temperatures as low as 5°C. Normal epoxy resins will not set at this temperature.

#### 4. Properties (Uncured)

Item	Unit	Resin	Hardener	Test Method
Appearance		Colourless	Transparent	3TS-201-02
Viscosity	Pa.s	13	10	3TS-210-02
Density		1.17	1.15	3TS-213-02
Mix ratio		100	100	
Pot life	min	5		

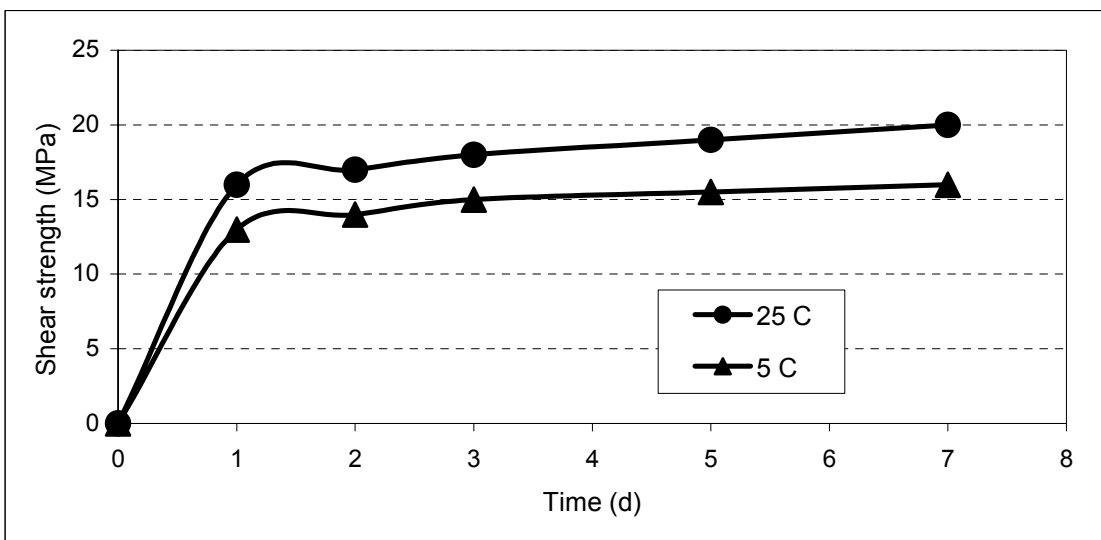
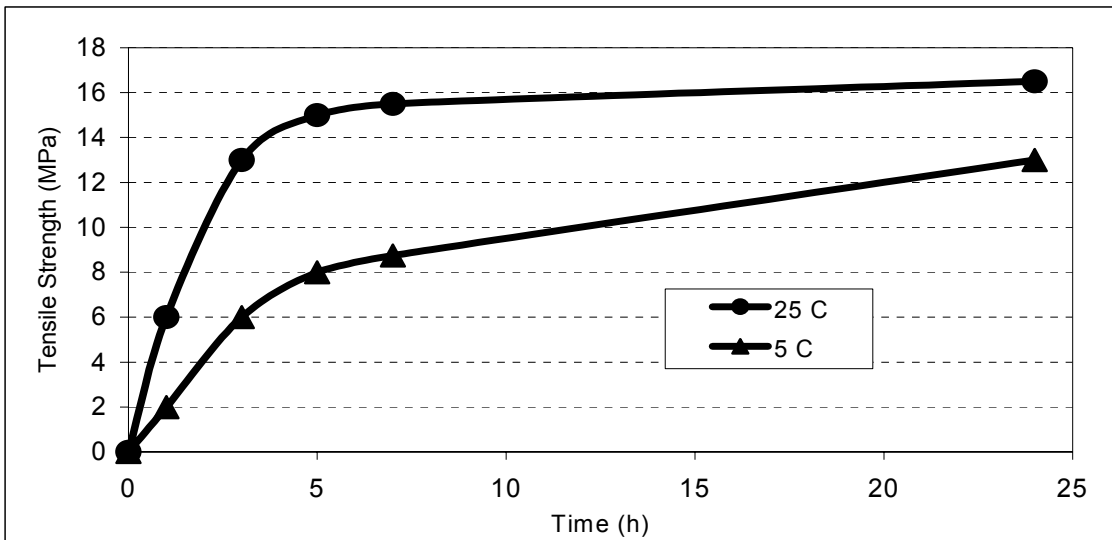
**5. Properties (Cured)**

**5.1 General**

Item	Unit	Result	Test Method
Hardness	Shore D	85	3TS-215-01
Shear strength (Mild steel laps)	MPa	20.3 (25°C x 7 days) 16.4 (5°C x 7 days)	3TS-301-11
Glass transition point	°C	44.7 (TMA method)	3TS-501-05
Linear expansion rate		64.5 x 10 <sup>-6</sup> ; α (20~30°C) 120.1 x 10 <sup>-6</sup> ; α (80~90°C)	3TS-501-05 (TMA method)

Hardening condition: 60°C x 1 hour + 25°C x 1 hour

**5.2 Curing Rate**



Test condition: 3TS-301-11 Mild steel lap shears

**5.3 Shear strength 3TS-301-11 (Mpa)**

<b>Material</b>	<b>Result</b>
Aluminium	5.7
Stainless steel	10.5
PVC (Hard type)	2.9
Acrylic	2.9
Nylon 66	1.9
Lauan plywood	8.1 (Substrate failure)
Natural Rubber	0.2 (Substrate failure)

**6. Instructions For Use**

- Keep the epoxy resin tightly closed in the original container and store it in a dark, dry, sufficiently ventilated and cool place at 5 ~ 25°C.
- Before opening the container let the product reach room temperature as otherwise the formation of dew could result.
- In order to obtain optimal results remove grease, dirt and other impurities from the fitting surfaces.
- According to the nature of the joints (width, surface roughness, unevennesses) apply an appropriate quantity of epoxy resin uniformly on one of the fitting surfaces and join the parts immediately, position them correctly and fix them. Parts are fixtured within 5 minutes at 25°C and fully set within 30 minutes at 25°C, longer at lower temperatures.
- The degree of curing varies depending on the thickness of the coating, the ambient temperature and the duration of the process.
- Resin once transferred into another container should not be returned to the original container. Excess sealant can be easily wiped off with a cloth.
- Avoid skin contact or wear suitable protective gloves. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of contact with skin, wash with plenty of water and soap.

**7. Packaging**

50ml mixer cartridge.

Data given here were compiled to the best of our knowledge and are based on experiments and tests of our Company. We cannot guarantee the results obtained through the use of our products, and all products are sold and samples given without any warranty, expressed or implied, of fitness for any particular purpose or otherwise and upon condition that the user shall make his own tests to determine the suitability of the product for his purpose.