ThreeBond Europe S.A.S.
BP 39105
95073 Cergy-Pontoise Cedex

TB 2086M

TECHNICAL DATA

ThreeBond 2086M

Fast Room Temperature Curing
Two Component Epoxy Resin

Three Bond 2086M is a two-component epoxy adhesive compound. It can start curing rapidly at room temperature (25°C) within 5 ~ 8 minutes. Practical strength will be reached in about 30 minutes. It can also give good curing ability and high adhesive strength even at lower temperature.
Low viscosity and clear transparent colour ensure good workability and clean joints.

Features

1. High adhesive strength.
2. Low temperature curing is possible.
3. Low viscosity, clear appearance, which makes the overlap portion not stand out.
4. Careful weighing of equal amount of resin and hardener is not necessary.

Application

1. Repair at low temperature
2. Bonding of area that requires short curing time
3. Bonding of various metals, glass, ceramic, tile, granite, concrete, plastics, wood, FRP, rubber. (Not suitable for polyethylene, polypropylene, fluoropolymer)

Properties:

Before cure

Items	Units	Resin	Hardener	Test Method
Appearance		Colourless, transparent	Light yellow, transparent	3TS-201-02
Viscosity (25°C)	Pa·s {P}	13 {130}	10 {100}	3TS-210-02
Specific Gravity (25°C)		1.17	1.15	3TS-213-02
Mixing ratio		100	100	By volume
Pot-life	min	5		25°C, 10g

※ The above results are experimental values and are not specification or guarantee values.

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After cure

Item	Units	Results	Test Method	Remarks
Hardness		85	3TS-215-01	JIS-D
Shear Strength	MPa	20.3: 25°C x 7 days 16.4: 5°C x 7 days	3TS-301-11	Fe/Fe: SPCC-SD
Glass Transition Temperature	°C	44.7	3TS-501-05	TMA
Coefficient of Thermal Expansion	/°C	64.5×10^{-6}	3TS-501-05	α_1 (20~30°C)
		120.1×10^{-6}		α_2 (80~90°C)

※ Curing condition: 60°C x 1h + 25°C x 1h
※ The above results are experimental values and are not specification or guarantee values.

1. Changes of bonding strength with time (3TS-301-11 (Fe/Fe: SPCC-SD))
   1 kgf/cm^2 = 9.81 x 10^{-2}MPa

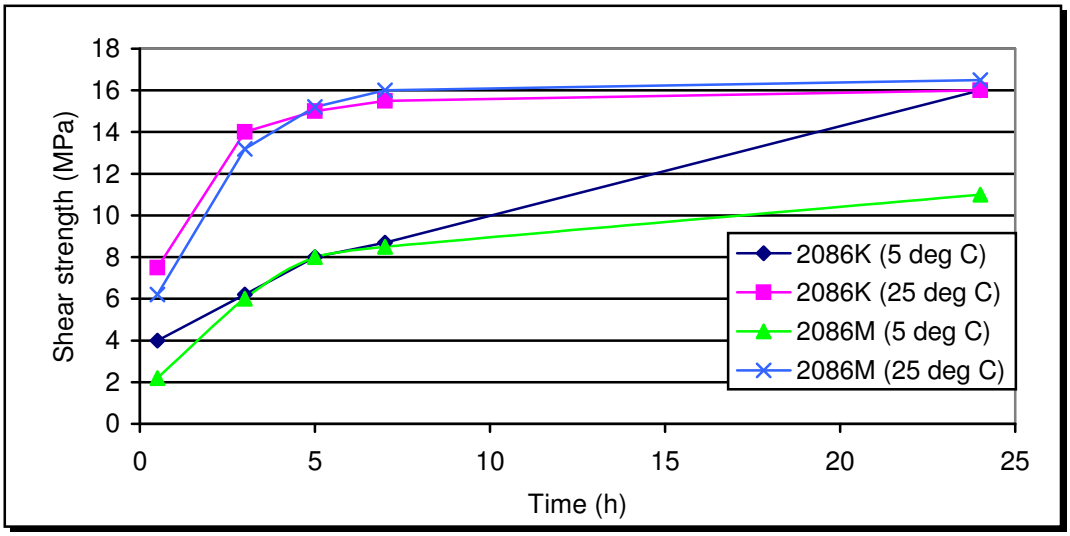

Chart 1: Shear Strength changes with different curing time at 5 and 25°C.

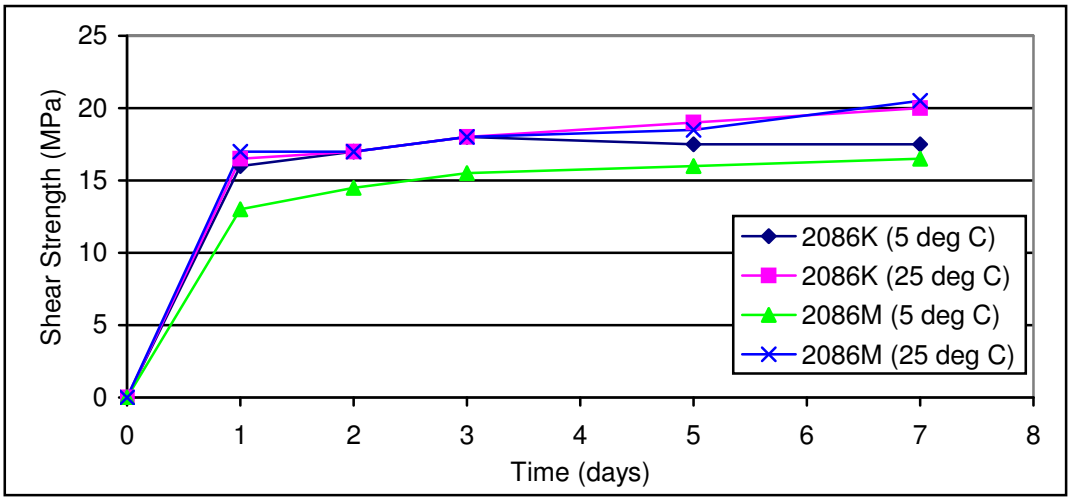

Chart 2: Shear Strength changes with time (in days) at 5 and 25°C.

2. Effect of Material on Bond Strength

Material Type	Shear Strength (MPa)
Aluminium	5.7
Stainless Steel	10.5
Hard PVC	2.9
Acrylic	2.9
6,6 Nylon	1.9
Lauan Laminate	8.1 *
Natural Rubber	0.2 *

Curing condition: 25°C x 7 days
Test Method: 3TS-301-11
* Material failure

Handling Method

1. Surface Treatment
   Remove moisture, grease, rust or other contaminant from the surface. Rust can be removed using sandpaper, while grease can be wiped off with thinner.
2. Mixing
   The ratio for resin and hardener is 1:1 (by volume). Just remove from the tube the required amount of each part and mix till the mixture is homogeneous. Chemical reaction will start after mixing and must be used within 5 minutes. Hence mix only the required amount for each application.
3. Application
   Apply a thin layer onto the surface of each substrate and press the both sides together. The pieces can be taped using cellophane tape to hold it together for a short period of time.
4. Curing
   Initial strength can be achieved after leaving at room temperature (25°C) for about ten minutes. Practical strength (50%) is obtained after leaving for 1 to 2 hours, and complete curing can be obtained in 7 days.

Handling Precautions

1. After taking the desired amount of resin and hardener, it must be mixed thoroughly to ensure homogeneous distribution. If mixing is not done properly, it may cause poor adhesion.
2. Do not cap the hardener onto the tube of resin and vice versa.
3. Direct skin contact may cause skin inflammation or irritation. If the product comes into contact with skin, wipe off immediately with paper or cloth and washed with warm soap water. If the product gets into the eye, wash with water and consult a physician immediately.
4. Keep the product capped tightly after use. Store away from direct sunlight or area of high humidity or high temperature.
5. Disposal of the product must be done by professional treatment.

Content

A set containing resins 100g (in a tube) and hardener 100g (in a tube) or resin 50ml and hardener 50 ml in a twin cartridge.

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Shelf Life

TB 2086M 200g set	12 months when stored at -5 ~ 25°C, unopened
TB 2086M 50 ml set	10 months when stored at -5 ~ 25°C, unopened

Packaging

Available in a 200g set and 50ml set.

Disclaimer

For Industrial Use Only

(Do not use for household purposes)

- The data contained in this report are obtained from experimental results, based on our test methods. We cannot assume absolute responsibility for accuracy and safety. Before using this product, use your own judgement to determine whether or not this product meets the requirements of the application and objectives. This includes the burden of responsibility and hazardous danger. The extent of the guarantee provides replacement for products, which are clearly unsatisfactory.
- We assume responsibility for neither injury nor property damages resulting from the misuse of this product.
- We do not assume responsibility without written notice or contract.