

ThreeBond

Technical Data

ThreeBond 1401B

Screw locking agent

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Three Bond Co., Ltd.

1. Product description

ThreeBond 1401B is a synthetic resin-based screw locking agent containing volatile solvent. It is effective in preventing not only loosening, but also leaking and rusting. Hereinafter, ThreeBond is abbreviated to TB.

2. Features

- (1) After applied, it dries and forms an elastic coating film excelling in resistance to vibration and impact.
- (2) Easy to remove.
- (3) Penetrable and can be applied to threaded portions after tightening.
- (4) Colored in blue to turquoise and easy to check after application.

3. Applications

- (1) Screws for electric communication devices in general.
- (2) Screws for home electric appliances and audio equipment in general.
- (3) Screws for fittings for doors and windows.

4. Properties

Table 1 General properties of TB1401B

Item	Unit	Result	Test method
Appearance	-	Blue to turquoise	3TS-2100-002
Viscosity	mPa·s	350	3TS-2F00-001
Specific gravity	-	0.88	3TS-2500-002
Heating residue	%	30	3TS-2510-005

5. Characteristics

5.1 Curing speed

Apply TB1401B to bolts M10, and tighten the nuts. Measure the fixing strength after the specified number of days.

- Bolts and nuts JIS, class 2, M10 × P1.5, plain steel
- Number of test pieces n=5
- Tightening torque 0 N·m
- Curing conditions 25°C for 1, 2, 3 and 7 days
- Measuring conditions 3TS-4150-001

Table 2 Curing speed

Number of curing days (days)	Fixing strength (breaking torque) (N·m)
1	1.3
2	5.8
3	9.2
7	10.7

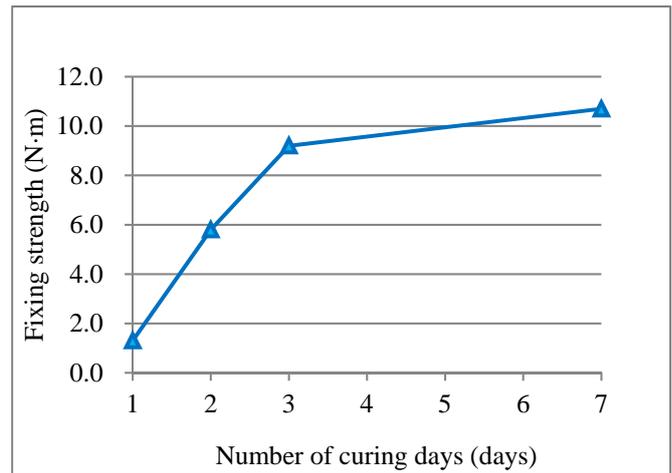


Fig. 1 Curing speed

5.2 Fixing strength by size

Apply TB1401B to each size of bolt, and tighten the nut. Measure the fixing strength after the specified time.

- Bolts and nuts JIS, class 2, M3 × P0.35, M4 × P0.7, M6 × P1.0, M8 × P1.25, M10 × P1.5, plain steel
- Number of test pieces n=5
- Tightening torque 0 N·m
- Curing conditions 25°C for 7 days
- Measuring conditions 3TS-4150-001

Table 3 Fixing strength by size

Bolt size	Fixing strength (breaking torque) (N·m)
M3	0.4
M4	1.0
M6	3.4
M8	7.5
M10	10.7

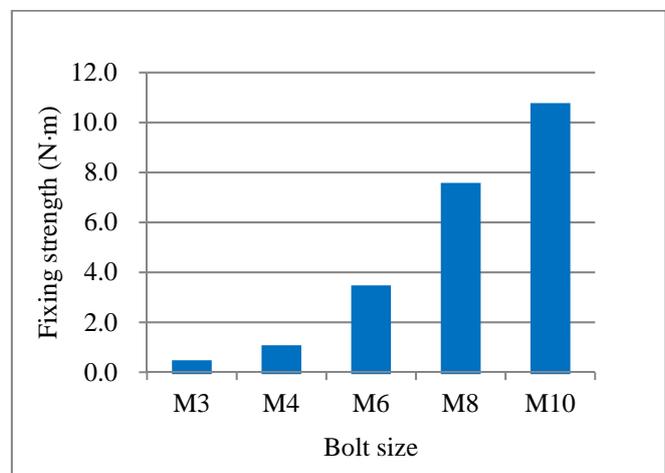


Fig. 2 Fixing strength by size

5.3 Fixing strength at each temperature

Apply TB1401B to bolts M10, and tighten the nuts. After the specified time, keep them at each ambient temperature for 2 hours, and measure the fixing strength at the temperature.

- Bolts and nuts JIS, class 2, M10 × P1.5, galvanized chromate treatment
- Number of test pieces n=5
- Tightening torque 0 N·m
- Curing conditions 25°C for 7 days
- Measuring conditions 3TS-4150-001

Table 4 Fixing strength test at various temperatures

Test temperature (°C)	Fixing strength (breaking torque) (N·m)
25	11.3
50	9.4
70	5.2

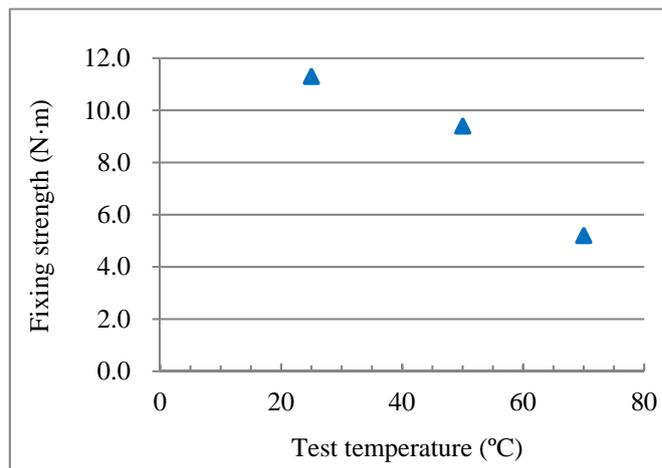


Fig. 3 Fixing strength test at various temperatures

6. Usage

- (1) Shake the container well prior to use.
- (2) Thoroughly remove water, oil and other contaminants from the threaded portion.
- (3) Apply TB1401B to the bolt threads using a brush or a dropper. Apply it to the portion to which the nut will be tightened.
- (4) If the sealing agent overflows, wipe it off with waste cloth.
- (5) Do not touch the bonding area until the nut is fixed. The curing speed varies depending on the working environment. Sufficiently check the curing speed prior to use.
- (6) The bolt can be removed by 10 to 20% greater force than the tightening force.
- (7) The product is applicable to screws of all sizes but suitable for rather small screws that are frequently removed.

7. Directions for use

- (1) It is harmful to the health. Do not touch it directly or inhale its vapors.
- (2) Use suitable protective equipment, such as a mask, goggles and gloves (impervious). Use in a well-ventilated outdoor area or in a place equipped with a local exhaust system.
- (3) If swallowed, do not induce vomiting. Immediately rinse the mouth, and get medical attention.
- (4) If in eyes, repeatedly and sufficiently rinse with clean water, and get medical attention.
- (5) If on skin, wipe with a cloth, and wash the skin thoroughly with water or soap and water.

- (6) If any bodily abnormalities occur, discontinue use, and get medical attention.
- (7) Persons who have allergies or sensitive skin should avoid using it.
- (8) Flammable. Keep away from fire.
- (9) Before using, sufficiently confirm whether the method of application and the purpose are appropriate.
- (10) Some materials may deteriorate if any of these products is used. The effects of the adhesive on the substrates must be confirmed by the operator in advance. Refrain from using the adhesive if any detrimental effects are observed.
- (11) Keep out of reach of children.
- (12) Do not transfer product into another container nor return unused product to the original container.
- (13) For detailed hazard information of the product, see the Safety Data Sheet (SDS).

8. Storage

- (1) Store with the cap tightly fitted to prevent deterioration and contamination.
- (2) Store in an indoor dark dry place avoiding fire, heat sources and direct sunlight.

9. Disposal

Ask an industrial waste disposal firm authorized by the governor to dispose of the product and its empty container as industrial waste.

10. Precautions

For Industrial Use Only

(Do not use for household purposes.)

This product is developed for general industrial use. Before using this product, the user must accept the following terms:

- The technical data given herein are not guaranteed values, but examples of experimental values obtained by our specified test methods.
We do not guarantee that the uses described herein do not conflict with any intellectual property right.
- Before using this product, confirm the appropriateness and safety of the use for the application in question, and bear all responsibilities and risks involved in the use.
Never embed or inject into bodies nor use as a medical implant that may be left in the body.
- We are not liable for personal injury or property damage caused by improper handling of this product.
If the properties or usage of the product to be used are unclear, never use it.
- For detailed safety information of the product, see the Safety Data Sheet (SDS).
To obtain the SDS, contact our sales office or customer service center.
- Information in this document is subject to change at our own discretion.

11. Registered trademark

ThreeBond is a trademark or a registered trademark of ThreeBond Co., Ltd.