

ThreeBond

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Three Bond Co., Ltd.

Technical Data

ThreeBond 7796

For Gold Label instant adhesives (Curing Accelerator for Instant Adhesives, Low-odor Type)

1. Product description

ThreeBond 7796 is a curing accelerator that promotes curing of instant adhesives. It is applicable to all instant adhesives in ThreeBond 1700 Series and ThreeBond 7700 Series.

Hereinafter, ThreeBond is abbreviated to TB.

2. Features

- (1) It reduces the curing time of instant adhesives.
- (2) Effective particularly in bonding porous materials (wood, leather, etc.)
- (3) Among our curing accelerators, this product has the best balance between low odor and curability.
- (4) It can prevent (reduce) blooming.

3. Applications

- (1) Bonding of screen printing gauzes and frames
- (2) Securing of lead wires and jumping wires on printed circuit boards
- (3) Bonding of components, such as IC chips and capacitors, on PC boards
- (4) Bonding of loudspeaker parts, such as loudspeaker cones and magnets
- (5) Securing terminals of coil windings
- (6) Bonding of porous materials (wood, leather, etc.)
- (7) Bonding of cores for casting

4. Properties

Table 1 Properties of TB7796

Test item	Unit	Properties	Test method	Remarks
Appearance	-	Colorless to light transparent brown	3TS-2100-001	Visual inspection
Specific gravity	-	0.75	3TS-2500-001	25°C

5. Characteristics

5.1 For the set time (steel sheet/steel sheet)

Test pieces which had been polished with abrasive paper and cleaned were used. TB7796 or TB1796 was applied to one of the test pieces with a brush, and it was dried for about 30 seconds. After this, TB1739 or TB1747 was applied to the other test piece, and immediately the test pieces were laminated. Then, the set time was measured.

Table 2 Set time of TB7796

Test item	Unit	Result	Test method
TB1739/TB7796	sec	Within 5	3TS-3140-004
TB1747/TB7796		Within 5	
TB1739/TB1796		Within 5	
TB1747/TB1796		Within 5	
TB1739		30	
TB1747		10	

[Test conditions]

Test piece: SPCC-SD (JIS G 3141)
 Abrasive paper: 240AA
 Amount of adhesive: Approx. 0.03 ml

5.2 For the set time (steel sheet/steel sheet) measurement (difference in set time depending on open time)

Test pieces which had been polished with abrasive paper and cleaned were used. TB7796 was applied to one of the test pieces with a brush, and it was dried for the predetermined time. After this, TB1747 was applied to the other test piece, and immediately the test pieces were laminated. Then, the set time was measured.

Table 3 Set time of TB7796 (difference depending on open time)

Open time	Unit	Result	Test method
10 sec	sec	Within 5	3TS-3140-004
30 sec		Within 5	
1 min		5 to 10	
3 min		10	

[Test conditions]

Test piece: SPCC-SD (JIS G 3141)
 Abrasive paper: 240AA
 Amount of adhesive: Approx. 0.03 ml

5.3 Curing time and lap shear strength

Test pieces which had been polished with abrasive paper and cleaned were used. TB7796 or TB1796 was applied to one of the test pieces with a brush, and it was dried for about 30 seconds. After this, TB1739 or TB1747 was applied to the other test piece, and immediately the test pieces were laminated. The lap shear strength was measured after a lapse of the predetermined time.

Table 4 Curing time and lap shear strength (unit: MPa)

Curing time	TB1739	TB1739/ TB7796	TB1739/ TB1796	TB1747	TB1747/ TB7796	TB1747/ TB1796
10 sec	-	1.3	1.9	-	0.9	2.1
1 min	-	2.7	2.5	0.3	1.8	2.3
3 min	1.1	3.2	2.5	1.6	2.6	2.3
24 hours	15.0	3.9	2.7	22.9	3.0	2.3

[Test conditions]

Test piece: SPCC-SD (JIS G 3141)
 Abrasive paper: 240AA
 Amount of adhesive: Approx. 0.03 ml
 Test method: Lap shear strength (3TS-4100-011)

6. Usage

- (1) Completely remove moisture, oil, rust and other contaminants from the surface to be bonded and the fitting area.
 - (2) Soak a brush or gauze in TB7796, and lightly wipe one of the substrates.
 - (3) Leave the surface for about 30 seconds to evaporate the solvent components.
 - (4) Apply an instant adhesive to the other substrate, and immediately laminate it to the above treated surface. The curing reaction of the adhesive will be accelerated in 5 to 10 seconds, and the adhesive will bond the substrates. Laminate the surfaces within 5 minutes after applying TB7796.
- ◇ In preventing blooming, it is effective to drop TB7796 onto the adhesive overflow that can cause blooming to forcibly cure the adhesive. The set time of the bonded area cannot be reduced by this method. However, since curing of the adhesive overflow is accelerated, a temporary securing effect of the adhesive overflow can be expected. In this case, decrease in the adhesive strength can be minimized as compared when TB7796 is applied directly to the surface to be bonded.

7. Directions for use

- (1) Harmful to health. Do not inhale or ingest.
- (2) When using it, wear appropriate protective clothing, such as a mask, goggles and gloves (impervious). Use it in a well-ventilated outdoor area or in a place equipped with a local exhaust system.
- (3) If swallowed, do not induce vomiting. Immediately get medical attention.
- (4) If in eyes or on skin, immediately rinse eyes or wash skin with clean water for 15 minutes or more. If any abnormality is found, get medical attention.
- (5) If you feel bad while using it, immediately stop using it, and keep quiet in a well-ventilated place. If you do not feel restored, get medical attention.
- (6) Persons who have allergies or sensitive skin should avoid using it.
- (7) Flammable. Keep away from fire.
- (8) Keep out of reach of children.
- (9) Do not use it for any purpose other than the specified purpose.
- (10) For Industrial Use Only. Do not use for household purposes.
- (11) Since this product contains organic solvents, it may affect thermoplastic materials and unvulcanized elastomers. It can cause deformation or cracking of these materials. Ascertain in advance whether or not it affects the parts to be treated with it. If any problem occurs, do not use it.
- (12) For hazard and toxicity information not mentioned herein, see the material safety data sheet (MSDS).

8. Storage

Seal the container closely, and store it in a dark place at room temperature avoiding direct sunlight.

9. Disposal

After the entire content has been used, ask an authorized specialist to dispose of the container as industrial waste.

10. Cautions

For Industrial Use Only

(Do not use for household purposes.)

Before using this product, you must accept the following sales 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.
- Users are asked to examine whether the product is appropriate to the purpose of use and can be used safely before they use it and bear all responsibilities and hazards involved in its use.
Never use the product for medical implant applications that may be embedded, injected or 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 Material Safety Data Sheet (MSDS).
To obtain the MSDS, contact our sales office or customer service center.
- Information in this technical document is subject to change at our discretion without notice.