

# TECHNICAL DATA SHEET



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## Three Bond 1782 Instant Adhesive

**Three Bond 1782** cyanoacrylate based instant adhesive is a solventless single component type liquid which bonds rapidly at room temperature and demonstrates excellent properties such as impact and heat resistance.

### Feature

- Adhere difficult surfaces.
- Particularly excellent adhesion to rubber, plastic and metal.
- Excellent curing speed. Good heat and impact resistance.

### Application

1. Bonding automotive components where heat and vibration always occur.
2. Bonding the components of electronic products that require heat and impact resistance.
3. Bonding vibrated portion of machinery such as bearing and motor.

### Characteristics

Item		Unit	TB 1782
Appearance			Clear transparent
Specific Gravity @ 25°C			1.05
Viscosity @ 25°C		mPa·s {cP}	80 {80}
Setting Time	NBR/NBR	sec	15
	Fe/Fe		20
Shear Bonding Strength	Fe/Fe	MPa {kgf/cm <sup>2</sup> }	20.0 {204}
	Al/Al		18 {180}
Impact Strength	Fe/Fe	kJ/m <sup>2</sup> {kgf·cm/cm <sup>2</sup> }	13 {13}

### Electrical Properties

Item	Unit	TB 1782
Dielectric Breakdown Voltage	kV/mm	28

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Volume Resistivity		$\Omega\cdot\text{cm}$	$1.3 \times 10^{14}$
Surface Resistivity		$\Omega$	$2.0 \times 10^{15}$
Dielectric	1 MHz	-	2.928
Dissipation	1 kHz	-	3.477
Factor	50 Hz	-	3.775
Dielectric Constant	1 MHz	-	0.0323
	1 kHz	-	0.0464
	50 Hz	-	0.1236

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**Shear Bonding Strength On Metal to Metal Materials, MPa {kgf/cm<sup>2</sup>}**

<b>Material</b>	<b>TB 1782</b>
Fe/Fe	25.5 {260}
Fe/Al	10.9 {111}
Fe/SUS	18.6 {190}
Fe/Cu	13.1 {134}
Fe/Brass	14.1 {144}
Al/Al	17.8 {182}
Al/SUS	11.3 {115}
Al/Cu	9.8 {100}
Al/Brass	17.1 {174}
SUS/SUS	18.4 {188}
SUS/Cu	11.6 {118}
SUS/Brass	16.8 {171}
Cu/Cu	13.7 {140}
Cu/Brass	13.9 {142}
Brass/Brass	15.1 {154}

**Shear Bonding Strength On Plastic to Plastic Materials, MPa {kgf/cm<sup>2</sup>}**

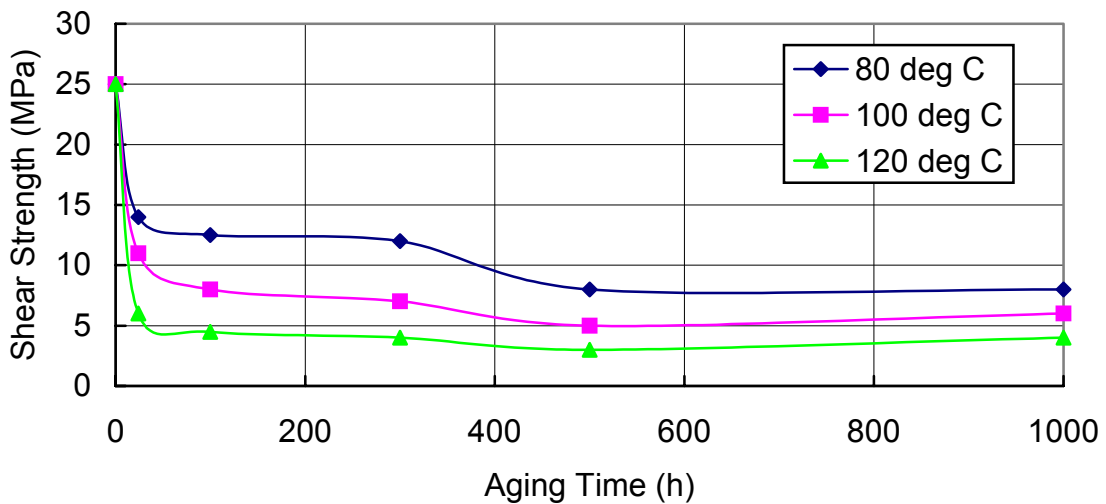
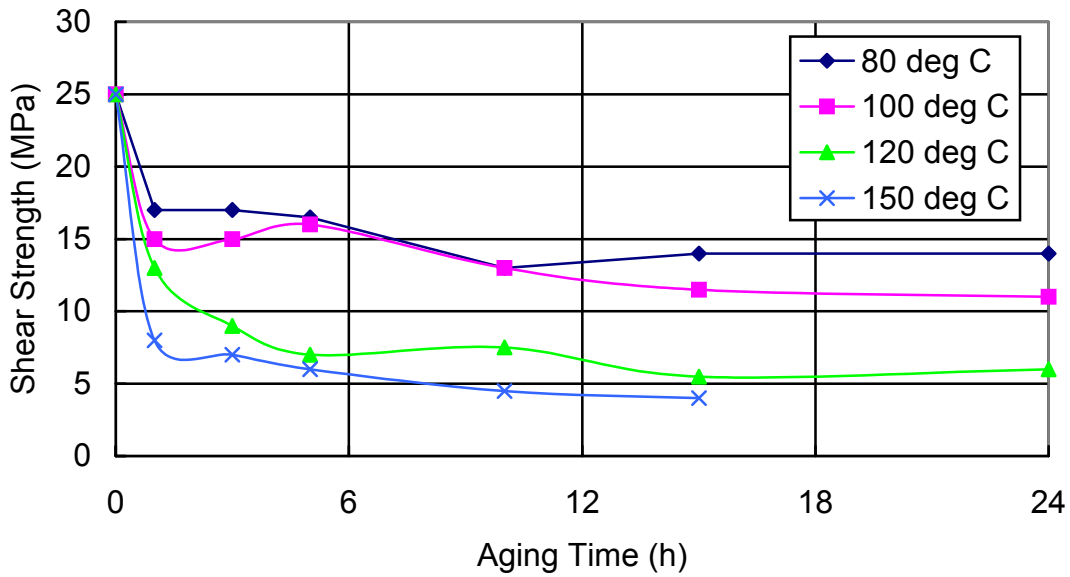
<b>Material</b>	<b>TB 1782</b>
Hard PVC	Material failure
PC	Material failure
Phenolic	Material failure
Nylon 6	5.0 {51}
Nylon 6,6	Material failure
ABS	Material failure
Epoxy Glass	11.8 {120}
PBT	1.7 {17}
PPO	Material failure
PPS	4.0 {33}
HIPS	Material failure
AC	Material failure
POM	1.6 {15}
PS	Material failure

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### Shear Bonding Strength On Rubber to Rubber Materials, MPa {kgf/cm<sup>2</sup>}

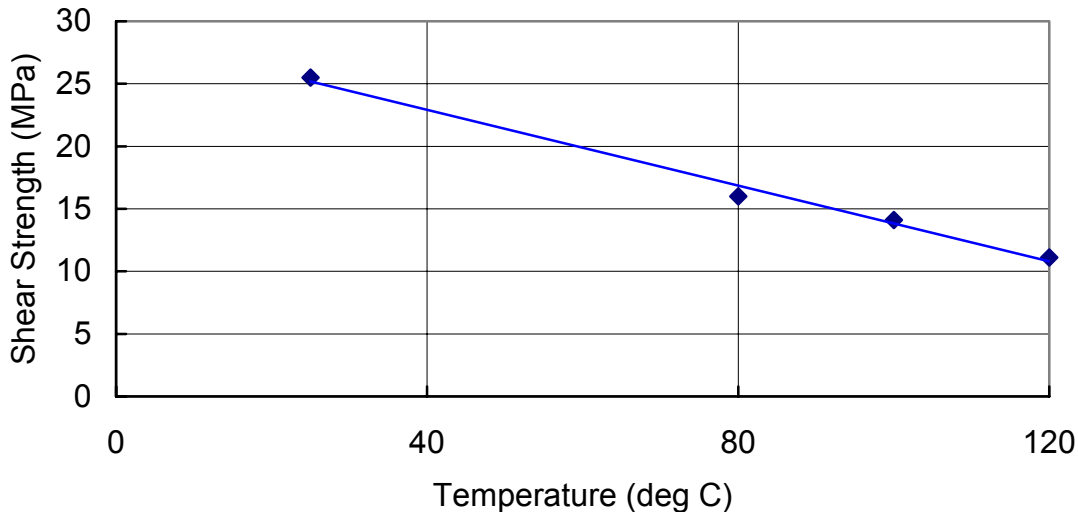
Material	TB 1782
NB	Material Failure
CR	
NBR	
SBR	
EPDM	

### Thermal Aging Behaviour of TB1782



### Shear Strength at Various Heating Temperatures

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### Handling Precautions

1. Harmful. Do not inhale or ingest. In the event that this product is ingested, consult a physician immediately.
2. If using a large amount of this product or using for a long time, it is compulsory to ventilate the area well. If necessary, use mask, non-permeable gloves, and protective glasses. Ventilate well with local exhaust equipment.
3. In case of eye contact, do not blink or rub eyes. Absolutely do not use remover or solvent. Consult a physician immediately.
4. In case of abnormal reaction, stop using the product and consult a physician.
5. Do not use on human body.
6. Persons with allergies or who are sensitive should not use this product.
7. Product may spray, do not point nozzle towards other persons.
8. Cautions: Bonds skin and mucous membrane instantly.
9. In case fingers or other skin areas are inseparably bonded together, gently tear apart by immersing into warm water (about 40°C) and rub around affected area.
10. Upon contact with clothes, burns may occur due to heat generated from the chemical reaction. Handle with appropriate care.
11. Please read direction and brochure carefully before use.
12. To prevent dew formation, wait till the contents had reached room temperature before opening.
13. Depending on the material of the mating surfaces, the surface may deteriorate. Confirm the effect of the product before use.
14. If adhesive overflows, whitening may occur.
15. This product cannot bond with polyethylene, polypropylene, silicone resin, soft PVC and glass.
16. Keep away from children.
17. Avoid direct sunlight; store at low temperature (5 ~ 10°C) and low humidity.

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18. Product may solidify in container. Do not store with accelerator, epoxy hardener or other alkali materials together.
19. Close lid tightly after use, then store.
20. After the adhesive has been used up, close the container tightly and dispose as other plastics.
21. This product is flammable. Please take the necessary precautions in storage and handling (refer to MSDS).
22. Clean the bonding area before use.
23. For industrial use only.

### **Shelf Life**

9 months unopened when stored at 5 ~ 10°C.

### **Packaging**

Available in sizes of 20g, 50g and 500g in HDPE plastic containers.

### **Disclaimer**

<b>For Industrial Use Only</b>
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(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.

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