

Three Bond 1731 Cyanoacrylate Adhesive Low viscosity

Jul-04

Product Outline

Three Bond 1731 is a solventless one component high performance industrial grade cyanoacrylate adhesive. This adhesive is particularly suited for applications requiring a very low viscosity, such as pre-assembled parts, and is designed to penetrate by capillary action between the substrates. It hardens in seconds at room temperature and demonstrates strong bonds to metals, most plastics and rubbers. This product contains an elastomer which improve shock resistance.

Properties of Uncured Material

Properties	Results	Units
Type	Ethyl	
Colour	yellow translucent	
Viscosity at 25°C	20	mPa·s
Density at 25°C	1.07	g/cm ³
Set time (23°C x 50 % RH) Nitrile rubber	< 60	s
Shelf life at 20°C	6	Months

Properties of Cured Material

Properties	Results	Units
Shear strength		
Mild steel	20	MPa
copper	14	MPa
PVC	1	MPa
Polycarbonate	10	MPa
ABS	3	MPa
Effective temperature range	- 50 ~ +85	°C
Maximum temperature	120	°C
Volume resistivity	> 2.10E10	Ω·m

Packaging

20g,50g,500g plastic bottle.

Directions For Use

- Danger! Bonds skin and eyes in seconds.
- Keep the product in its original container, tightly closed and store it in a dark, dry, sufficiently ventilated and cool place at 5 ~ 25°C.
- For optimum bonding remove grease, dirt and other impurities from the fitting faces with for example alcohol, acetone or MEK.
- The best results are obtained when bonding the parts at 23°C 40 ~ 80 % RH. A lower humidity slows the curing process, a higher humidity accelerates the curing process but can weaken the bond strength by 10 ~ 15 %. Acidic fitting surfaces (pH-Value < 7) can delay thorough curing whilst alkali surfaces (pH-Value > 7) accelerates the polymerisation.
- In the case of difficult to bond substrates, apply Primer Three Bond 1797 on the fitting faces and allow to dry (adhere within 1h).
- In the case of difficult bonding conditions where cure speed is long due to large gaps or low relative humidity, apply Activator Three Bond 1796B on one of the fitting faces and allow to dry (adhere within 1h).
- Apply a thin coat of adhesive on one of the fitting faces (≈ 5 mg/cm²) and join the parts immediately, position correctly and fix them under slight pressure.
- In the case of thick sections, ensure complete curing by the subsequent application of Activator Three Bond 1796B directly on the cyanoacrylate adhesive.
- In order to prevent premature ageing of the adhesive it should not be stored below -5°C or together with water, alcohol, amines, alkalis or dioxides.
- Excess adhesive should be immediately wiped off with a cloth. Cured cyanoacrylate adhesive can be removed by repeated coating with Remover Three Bond 17F-024.

Accessories

	Remover TB17F-024	Activator TB1796B	Primer TB1797
Type	Nitroethane Ethanol	Isopropyl- Alcohol	Acetone, Methanol
Colour	Transparent	Transparent	Transparent
Viscosity mPa·s	2.50	0.90	0.85
Density [g/cm ³]	0.99	0.79	0.80
Flash point °C	26	21	-9.5
Shelf life at 5°C	12 months	9 months	9 months
Packing units	100ml. 51	100 ml. 51	100 ml

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.