

Technical Data Sheet

PRODUCT SPECIFICATION

500-RTB

Cyanoacrylate Adhesive

Description:

This black, rubber toughened, high viscosity instant adhesive is specially formulated to deliver superior resistance to peel and shock loads. Engineered for bonding rubbers, metals and plastics, this single component, solvent free system requires no catalysts, heat or clamping. When applied as a thin film between two surfaces, exposure to atmospheric moisture triggers rapid polymerisation, producing an exceptionally strong and resilient bond.

Typical Properties of Cured/Uncured Material:

Liquid State		Cured State	
Base	Ethyl Cyanoacrylate	Colour	Black
Colour	Black	Specific Gravity (20°C)	1.1~1.3
Specific Gravity (20°C)	~1.10	Working Temp (°C)	-55°C - 125°C
Flash Point (°C)	>80°C	Coefficient of Thermal Expansion (K-1)	80 x 10 ⁻⁶
Shelf Life	6 Months	Coefficient of Thermal Conductivity (W/m.K)	0.1
Boiling Point (°C)	>214°C	Glass Transition Temp (°C)	120°C
Viscosity (cP) at 25 °C (Brookfield LV-52Z at 2rpm)	300-500	Volume Resistivity (Ω.cm)	1 x 10 ¹⁶
		Dielectric Constant (at 10kHz)	2.30
		Dielectric Dissipation Factor (at 10kHz)	<0.02
		Dielectric Breakdown Strength (kV/mm)	25
Soluble in Acetone, Dimethyl formamide, Nitromethane, Dimethyl sulfoxide			

Bond Strength:

(Tensile strength, cured for 24 hours at 20-25°C)

Substrate	kg/cm ²	Substrate	kg/cm ²
Steel to Steel	200-310	ABS to ABS	45-200
Stainless Steel to Stainless Steel	160-210	Polycarbonate to Polycarbonate	50-200
Aluminium to Aluminium	140-200	Polystyrene	30-130
Copper to Copper	130-170	NBR to NBR	5-9
PVC to PVC	40-150	SBR to SBR	5-9

Curing Performance:

There are many factors that can influence the rate of cure. These include: the types of substrates used, the condition of the surface to be bonded, the smoothness of the surface, the closeness of the surfaces and the atmospheric conditions.

Substrate	Seconds	Substrate	Seconds
ABS to ABS	10-60	NBR to NBR	15-25
Steel to Steel	20-35	Stainless Steel to Stainless Steel	60-120
Aluminium to Aluminium	10-30	Zinc Plated	40-90
ABS to NBR	15-25	ABS to Wood	15-25
Polycarbonate to Polycarbonate	25-35		

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Directions For Use:

1. Make sure the surfaces to be bonded are clean and dry. (Solvent wipe plastics, glass, rubber and acid treat metals)
2. Dispense a drop or drops to one surface only. Apply only enough to leave a thin film after compression.
3. Press parts together and hold firmly for a few seconds. Good contact is essential. An adequate bond develops in less than one minute. (Maximum strength is achieved in 24 to 48 hours).
4. Wipe off excess adhesive from the top of the container and recap, if left uncapped, may deteriorate by contamination from moisture in the air.
5. Because the adhesive polymerises on contact with moisture surfaces, sometimes whitening will occur on the surface of the container or the bonded materials. Should this happen, wipe surfaces well with debonder.

Handling & Storage:

Storage: Keep products in the unopened container in a cool dry location. The product is best when stored at 2 to 8°C. Temperatures less than 2°C can adversely affect product properties. Do not freeze. Keep the container tightly closed until ready for use.

Handling: Material removed from containers may be contaminated during use. Do not pour back any product to the original container. Misuse of product will void all warranties.

Precaution:

1. Use with proper ventilation. Avoid contact with skin and eyes.
2. If contact with skin occurs, rinse with warm water or dissolve with appropriate debonder. Do not try to remove it forcibly.
3. If the adhesive gets into your eye, keep eye open and rinse thoroughly. Seek medical attention immediately.
4. Keep well out of reach of children.
5. Keep adhesive in a cool dry place 20-25°C. For long-term storage, refrigeration (5°C) is recommended.

Disclaimer:

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