



ENGLISH

Datasheet

Transparent Liquid Bottle Cyanoacrylate Adhesive

RS Stock number [473-449](#)



Description:

This Superglue is a low-medium viscosity Ethyl Cyanoacrylate adhesive. This product is suitable for bonding a very wide range of materials, including some porous ones, where very fast cure speed is required. It is supplied bottles of 20 g in weight.

Applications:

The product is specially formulated to give superior bonds on common substrates. This product works on acidic and porous substrates where other cyanoacrylates fail to bond. Will bond wood, cork, leather, cardboard and similar surfaces. It also relies less on surface moisture for cure speed than standard cyanoacrylates.



Properties:

Chemical Type:	Ethyl
Appearance:	Clear Liquid
Specific Gravity:	1.06
Viscosity (cPs):	34 - 44
Typical Value (cPs):	40
Tensile Strength (N/mm ²):	21
Fixture Time (secs):	3 - 20
Full Cure (hours):	24
Flash Point (°C):	> 85
Shelf Life at 5 °C (months):	12
Max Gap Fill (mm):	0.1
Temperature Range (°C):	-50 to 80 (continuous)

Curing Performance:

Typical Speed:

Steel / Steel:	< 20 seconds
ABS / ABS:	< 10 seconds
Rubber / Rubber:	< 5 seconds
Wood (Balsa):	< 3 seconds

Cure Speed vs Substrate:

The speed of cure of cyanoacrylates varies according to the substrates to be bonded. Acidic surfaces such as paper and leather will have longer cure times than most plastics and rubbers. Some plastics with very low surface energies, such as polyethylene, polypropylene and Teflon® require the use of a Primer.

Cure Speed vs Environmental Conditions:

Cyanoacrylate adhesives require surface moisture on the substrates in order to initiate the curing mechanism. The speed of cure is reduced in low humidity conditions. Low temperatures will also reduce cure speed. All figures relating to cure speed are tested at 21°C.

Cure Speed vs Bond Gap:

Cyanoacrylate will give best results on close fitting parts. The product should be applied in a very thin line in order to ensure rapid polymerisation and a strong bond. Excessive bond gaps will result in slower cure speeds.



Cure Speed vs Activator:

Activators may be used in conjunction with the product where cure speed needs to be accelerated. Cure speeds of less than 2 seconds can be obtained with most cyanoacrylates. The use of an activator can reduce the final bond strength by up to 30% - the product should be tested on the parts to measure the effect.

Environmental Resistance:

Hot Strength:

Cyanoacrylate adhesives are suitable for use at temperatures up to 80°C. At 80°C the bond will be approximately 70% of the strength at 21°C. The bond strength at 100°C is approximately 50% of full strength at 21°C.

Heat Ageing:

Cyanoacrylates retain over 90% of their strength when heated to 80°C for 90 days and then tested at 21°C. Heating the bond to 100°C and then testing at 21°C gives bond strength of approximately 50% of initial strength.

Chemical / Solvent Resistance:

Cyanoacrylates exhibit excellent chemical resistance to most oils and solvents including motor oil, leaded petrol, ethanol, propanol and freon. Cyanoacrylates are not resistant to high levels of moisture or humidity over time.



Removal of Cured Cyanoacrylate:

Cured cyanoacrylate may be removed from most substrates with a debonder. It is not possible to fully remove cyanoacrylate from fabrics.

Directions:

Bond speed is very fast so ensure that parts are properly aligned before bonding. Activators may be required if there are gaps or porous surfaces. Some plastics may require application of Primers. Ensure parts are clean, dry and free from oil and grease. Product is normally hand applied from the bottle. Apply sparingly to one surface and press parts firmly together until handling strength is achieved. As a general rule, as little cyanoacrylate as possible should be used – over application will result in slow cure speed and lower bond strength.

Storage:

Store in a cool area out of direct sunlight. Refrigeration to 5 °C gives optimum storage stability.