

Technical Information PC09 Gel



Product Description

Procure™ PC09 is a standard curing, non drip cyanoacrylate. Specially formulated to allow time for alignment of parts before curing. **PC09** has excellent gap-filling capabilities on vertical, and overhead surfaces. Suitable for bonding metals, wood, rubbers and plastics.

Physical Properties

Liquid State		Cured State	
Base	Ethyl Cyanoacrylate	Colour	Clear
Colour	Clear	Specific Gravity (20°C)	1.1-1.3
Specific Gravity (20°C)	1.06	Service Temperature	-55 °C to 80°C
Refraction Index (n 20D)	1.439	Refractive Index (n 20D)	1.48
Flash Point (°C)	>80°C	Dielectric Constant (at 10MHz)	3.5
Shelf Life	12 months		
Boiling Point	65°C at 16mmHg	Soluble in Acetone, Nitromethane.	
Viscosity (cP)	100,000-200,000		

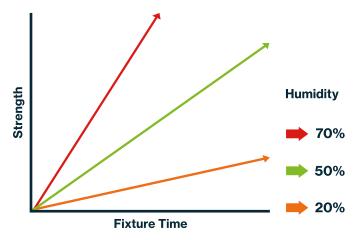
Bond Strength

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

Substrate	N/mm²
Rigid PVC to Rigid PVC	5 to 7
ABS to ABS	5 to 7
Nitrile Rubber to Nitrile Rubber	5 to 10
Stainless steel to Stainless steel	20 to 22
Aluminium to Aluminium	17 to 19

Fixture Time vs. Humidity

Cyanoacrylates require surface moisture on the substrates in order to initiate the curing mechanism. The speed of cure is reduced in low-humidity conditions.



The graph depicted is not scientific and is for guidance only.

Typical Fixture Time Performance

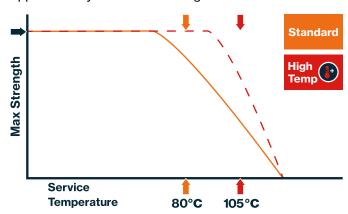
Substrate	Seconds
Steel to Steel	>60
ABS to ABS	>60
Nitrile Rubber to Nitrile Rubber	>10
Wood to Wood (balsa)	>60

Conversions		
(°C x 1.8) + 32	°F	
N/mm² ÷ 0.098	kg/cm²	
N/mm² x 145	psi	
MPa x 145	psi	
mPa⋅s	сР	

(Full cure and maximum strength achieved after 24 hours)

Hot Strength

Procure™ cyanoacrylates 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.



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Chemical/Solvent Resistance

Procure™ cyanoacrylates exhibit excellent chemical resistance to most oils and solvents including motor oil, leaded petrol, ethanol and isopropanol. Cyanoacrylates are generally not resistant to high levels of moisture or humidity over extended periods of time.

Fixture Time vs. Bond Gap

Procure™ cyanoacrylates 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 fixture times.

Fixture Time vs. Activator

Procure[™] activators PC750, PC780 and PC790 may be used with cyanoacrylates where a faster cure speed is required. Fixture times of less than 2 seconds can be obtained with most cyanoacrylates. Testing on the parts to measure the effect is recommended.



Directions For Use

- 1. Make sure the surfaces to be bonded are clean and dry.
- 2. Dispense adhesive 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. (Maximum strength is achieved in 24 hours).
- 4. Procure™ activator can be used to cure exposed adhesive outside of the joint, to help prevent blooming.
- 5. Wipe off excess adhesive from the top of the container and recap.

Priming

Procure™ PC77 primer is recommended for use on low energy plastic surfaces such as polyethylene, polypropylene, PTFE and thermoplastic rubber materials.

Apply to one surface only. **PC77** also has a mild activating effect which may accelerate the cure speed of cyanoacrylate adhesives.

Debonding

Cured cyanoacrylate may be removed from most substrates, and parts disassembled, with Procure™ PC68 debonder - however, ensure to test compatibility of the substrate with PC68 first as this may dissolve some plastics.

It is not possible to fully remove cyanoacrylate from fabrics.

Storage

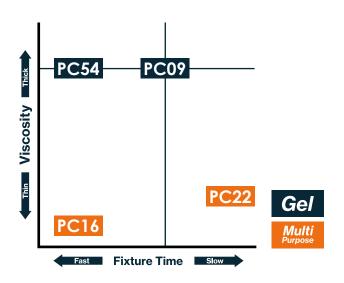
Store in a cool area and out of direct sunlight. Refrigeration to 5°C gives optimum storage stability.

General Information

For information on safe handling of this product consult the Safety Data Sheet (SDS).

Alternative Product Suggestions

The following suggested products will allow adjustments to the fixture time performance, and viscosity if needed.



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