

# Technical Information PC07 Multi Purpose



Fast Cure - Medium Viscosity

## **Product Description**

**Procure™ PC07** is a multi purpose, fast curing, medium to high viscosity cyanoacrylate. **PC07** is specially formulated to bond plastics and rubbers quickly. Ideal for use on small to medium-sized parts. Will also bond most woods and metals.

# **Physical Properties**

<b>Liquid State</b>		Cured State					
Base	Ethyl Cyanoacrylate	Colour	Clear				
Colour	Clear	Specific Gravity (20°C)	1.1-1.3				
Specific Gravity (20°C)	1.05-1.06	Service Temperature	-55 °C to 80°C				
Refraction Index (n 20D)	1.439	Refractive Index (n 20D)	1.49				
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)	700-1000						

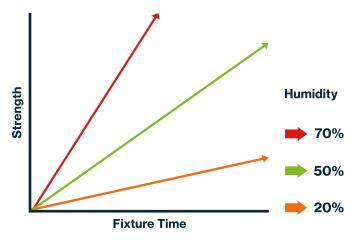
## **Bond Strength**

(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**

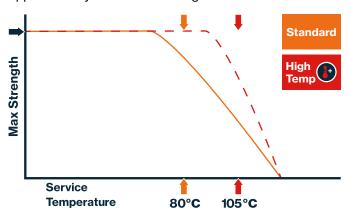
Substrate	Seconds			
Steel to Steel	23-30			
ABS to ABS	15-20			
Nitrile Rubber to Nitrile Rubber	3-5			
Wood to Wood (balsa)	>60			

Conversion	s
(°C x 1.8) + 32	°F
N/mm² ÷ 0.098	kg/cm <sup>2</sup>
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<sup>™</sup> 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.

## **Dispensing**

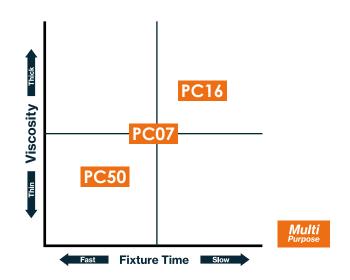
Factors that affect dispensing are pressure, time and needle size. As a general reference low viscosity liquid would need a small needle diameter and less pressure, a high viscosity liquid would need a larger needle diameter (tapered recommended) with higher pressure to dispense.

	Recommended Tip for Hand Dispensing												
More													
Gauge Chart		Size Indicator	•	•	•	•							100
		Metal Tip	17	18	19	20	21	22	23	24	25	26	27
		Tapered Tip		18		20		22			25		
		Colour											

This chart is a recommended gauge for hand dispensing based on the product viscosity, other factors not mentioned above may also affect dispensing. Tip colour may vary.

## **Alternative Product Suggestions**

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



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## **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).



## Disclaimer

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