



### Product Description

Procure™ PC1144 is a high performance, ultra fast curing, penetrating grade cyanoacrylate. It is formulated to be used on pre-assembled parts due to its thin, wicking properties. Designed to achieve the strongest bond on well mated, non-porous substrates such as nitrile and ABS, which can be bonded to themselves and other materials such as rubbers, metals, plastics and glass.

### 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)	1.05-1.06	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	Soluble in Acetone, Nitromethane.	
Boiling Point	65°C at 16mmHg		
Viscosity (cP)	5		

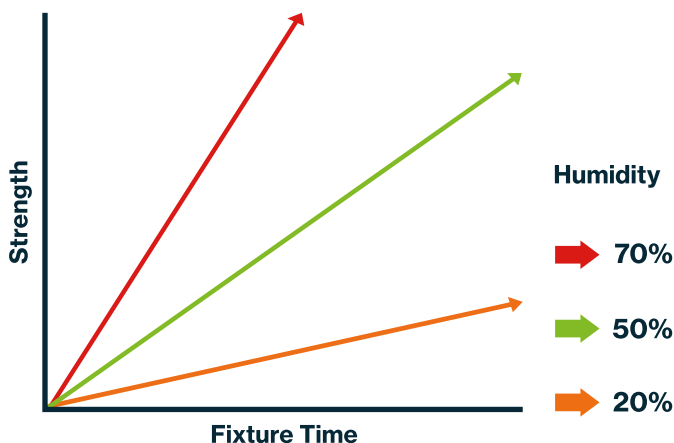
### Bond Strength

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

Substrate	N/mm <sup>2</sup>
Rigid PVC to Rigid PVC	4 to 6
ABS to ABS	5 to 7
Nitrile Rubber to Nitrile Rubber	5 to 9
Stainless steel to Stainless steel	16 to 18
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.

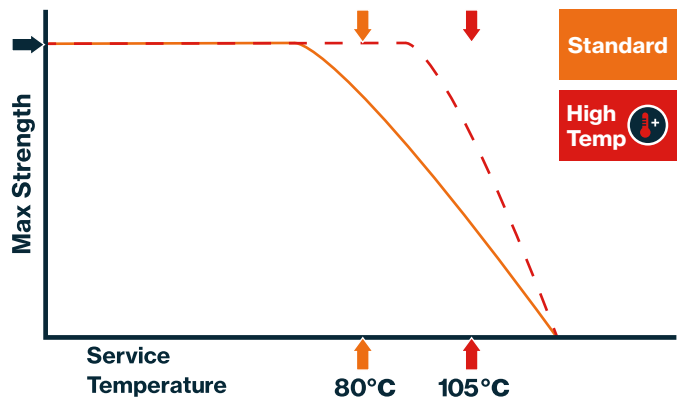
### Typical Fixture Time Performance

Substrate	Seconds	Conversions	
Stainless Steel to Stainless Steel	<5	(°C x 1.8) + 32	°F
ABS to ABS	<5	N/mm <sup>2</sup> ÷ 0.098	kg/cm <sup>2</sup>
Nitrile Rubber to Nitrile Rubber	<5	N/mm <sup>2</sup> x 145	psi
Wood to Wood (balsa)	<3	MPa x 145	psi
		mPa.s	cP

(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.



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

### 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.

SCAN FOR SAFETY DATA SHEET



## 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.*

## 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					Less					
Gauge Chart	Size Indicator	•	•	•	•	•	•	•	•	•	•	
	Metal Tip	17	18	19	20	21	22	23	24	25	26	27
	Tapered Tip		18		20		22			25		
	Colour		Green		Pink		Purple		Blue		Orange	

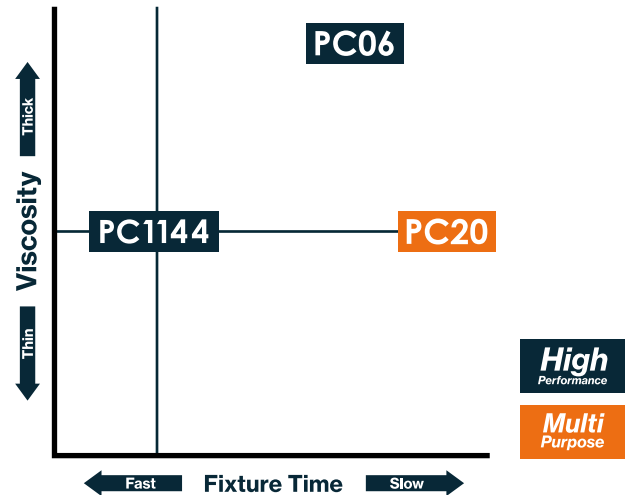
This chart is a recommended gauge for hand dispensing based on the product viscosity, other factors not mentioned above may also affect dispensing. Tip colour may vary.

## Disclaimer

The data contained herein are furnished for informational purposes only and are believed to be reliable. However, Cyanotec Ltd does not assume responsibility for any results obtained by persons over whose methods Cyanotec Ltd has no control. It is the user's responsibility to determine the suitability of Cyanotec Ltd products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Cyanotec Ltd products. Cyanotec Ltd specifically disclaims all warranties express or implied, including warranties of saleability and suitability for a particular purpose arising from sale or use of Cyanotec Ltd products. Cyanotec Ltd further disclaims any liability for consequential or incremental damages of any kind including lost profits.

## Alternative Product Suggestions

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



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

## 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).

SCAN FOR FULL PROCURE RANGE

