

RITE **LOK PR 40**

TECHNICAL

PRODUCT DESCRIPTION

Rite Lok PR-40 is a low-medium viscosity Ethyl Cyanoacrylate adhesive. PR-40 is formulated for high speed, high strength bonding of plastics and rubbers.

TYPICAL APPLICATIONS

PR-40 is specially formulated for the bonding of most plastics and rubbers, but will also bond other common substrates. Recommended for use on close-fitting parts and smooth, even surfaces.

PROPERTIES OF UNCURED MATERIAL

		Value
Chemical type		Ethyl
Appearance		Clear
Specific Gravity		1.06
Viscosity cPs ¹		
– range		34-44
– typical value		40
Tensile Strength ²	(N/mm ²)	20
Fixture Time	(secs)	3-20
Full Cure	(hours)	24
Flash Point	(°C)	> 85
Shelf Life @ 5°C	(months)	12
Max Gap Fill	(mm)	0.10
Operating Temperature Range	(°C)	-50 to +80

¹ ISO 3104/3105

² ISO 6922

TYPICAL CURING PERFORMANCE

Typical Speed:		
Steel/steel		<20 seconds
ABS/ABS		<10 seconds
Rubber/Rubber		<5 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 Rite Lok AC-77 Primer (see AC-77 TDS for further info).

Cure speed vs. bond gap

Rite Lok 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 cure speeds. Rite Lok AC11 and AC12 Cyanoacrylate Activators may be used to greatly increase cure speeds (see AC11 and AC12 TDS for further info).

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. activator

Rite Lok Activators AC11 and AC12 may be used in conjunction with Rite Lok cyanoacrylates where cure speed needs to be accelerated. Cure speeds of less than 2 seconds can be obtained with most Rite Lok cyanoacrylates. The use of an activator can reduce the final bond strength by up to 30% - Chemence recommends testing on the parts to measure the effect.

TYPICAL ENVIRONMENTAL RESISTANCE

Hot strength

Rite Lok 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.

TECHNICAL DATA

TYPICAL ENVIRONMENTAL RESISTANCE

Heat ageing

Rite Lok 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

Rite Lok 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.

GENERAL INFORMATION

For safe handling of this product consult the Material Safety Data Sheet.

REMOVAL OF CURED CYANOACRYLATE

Cured cyanoacrylate may be removed from most substrates, and parts disassembled, with Rite Lok AC68 Debonder. It is not possible to fully remove cyanoacrylate from fabrics.

DIRECTIONS FOR USE

Bond speed is very fast so ensure that parts are properly aligned before bonding.

Rite Lok Activators may be required if there are gaps or porous surfaces. Some plastics may require application of Rite Lok AC77 Primer.

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.

Please contact your Rite Lok representative for further advice on dispensing solutions.

STORAGE

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

PRESENTATION

Bottles: 20g, 50g and 500g. Available in bulk for use with dispensing systems.

DATA RANGES

The data contained in this data sheet may be reported as typical value and/or range. Values are based on actual test data and are verified on a regular basis.

NOTES

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