

AL-MP-LIQUID ADHESIVE SPECIFICATIONS

SI-GEL SUPERGLUE

DESCRIPTION

Ritelok SI-GEL Instant Superglue is a very high viscosity surface insensitive ethyl cyanoacrylate based adhesive. The thixotropic gel formulation is suitable for bonding a very wide range of materials.

TYPICAL APPLICATIONS

SI-GEL is specially formulated for high strength, general purpose bonding of most plastics, rubbers, metals and other common substrates. The gel formulation is suitable for bonding poorly mating surfaces requiring some gap filling properties. It is also suitable for use on vertical surfaces as it will not drip or slump.

USEFUL HINTS/NOTES

Cure speed can be improved where cure speed is unacceptably long due to gap thickness or low humidity by using a Ritelok Activator. However, this can result in a reduction in ultimate bond strength. Testing is recommended before use.

PROPERTIES

Very High Viscosity—Gel

Speed:	Metal/Metal	<120 seconds
	Plastic/Plastic	<60 seconds
	Rubber/Rubber	<45 seconds

INSTRUCTIONS FOR USE

Ensure parts are clean and free from oil and grease.

PROCEDURE FOR APPLICATION

Product is normally hand applied from a tube or cartridge. Apply sparingly to one side and hold parts together firmly until handling strength is achieved. Product performs best with minimal gap (0.05 mm or less). Excess adhesive can be dissolved with Acetone.

COMPATIBLE ACCELERATORS/PRIMER

Activators may be required for large gap or porous surfaces. Activators also help bond difficult to bond substrates and accelerate cure speeds on cold weather applications. Some plastics may require RiteLok AC77 primer. Use of an activator can reduce bond strength. Recommend testing for suitability of application.

Ethyl Cyanoacrylate

TECHNICAL FEATURES

Resin:	Ethyl CA
Color	max APHA 100
Cure Speed with Activator	< 3 seconds
Cure speed without Activator.....	10-30 seconds
Viscosity ¹ cps:	
- Range @ 2.5rpm	100,000-150,000
- Range @ 20rpm	18,000-35,000
Gap Fill:	0.012”
Flash Point:.....	>185°F
Shelf Life	12 months @ 40°F
Specific Gravity.....	1.10
Max. Operating Temperature	-65°F to 180°F

¹ Brookfield RVT, spindle 7

CURED PERFORMANCE

Full Cure Time	24 hours @ 68°F
Shear Strength	700-3800 psi (substrate dependent)

STORAGE

Store in a cool area out of direct sunlight. Refrigeration between 35°F – 48°F gives optimum storage stability. Allow warming to room temperature before using. Do not return unused material to its original container.

CURE SPEED vs. SUBSTRATE

The rate of cure will depend on the substrate used. The table below shows the fixture time achieved on the different materials at 22°C, 50% relative humidity. This is defined as the time to develop a shear strength of .1 N/mm².

Fixture time, ASTM D 1002/EN 1465, seconds:

Steel (degreased)	5 to 20
Aluminum	2 to 10
Zinc Dichromate	10 to 20
Neoprene	<5
Rubber, Nitrile	<5
ABS	2 to 10
PVC	2 to 10
Polycarbonate	10 to 40
Phenolic Materials	2 to 10