

# USP VI MEDICAL GRADE CYANOACRYLATES

## TECHNICAL DATA SHEET

USP VI Grades: MG5, MG30, MG100, MG500, MG1000, MG1500, MG2400, MG3200 & MG4000

**Product Description:** The advanced performance series of USP VI Cyanoacrylates are a family of products that have been designed and manufactured to meet the demands of today's product assembly requirements while at the same time passing the USP VI test. These single component, room temperature and rapid curing adhesives have been tested and meet the requirements of the USP VI classification. They are used in medical and applications where the USP VI classification is a requirement.

<u>Physical Properties:</u>	5	30	100	500	1000	1500	2400	3200	4000
(Uncured Properties)									
Base Compound	-----Ethyl Cyanoacrylate-----								
Appearance	-----Colorless, transparent liquid-----								
Viscosity @ 20°C	5	30	100	500	1000	1500	2400	3200	4000
Flash Point (TCC)	-----182°F-----								
Density	-----1.05 to 1.08-----								
Shelf Life	-----One year-----								
Soluble in	-----Nitromethane-----								
Military Spec	-----Type II-----								
Class	1	1	2	2	3	3	3	3	3
(Cured Properties)									
Gap Fill (Inches)	.002	.003	.006	.007	.008	.008	.008	.008	.008
Softening Range	-----284°F to 293°F-----								
Melting Point	-----347°F to 365°F-----								
Density	-----1.20 to 1.25-----								
Hardness (Shore A)	-----85-----								
Weatherability	-----No change observed after 200 hours-----								
Solubility	-----Nitromethane-----								
Fixture Time (Sec)	<15	<15	<15	<15	<15	<15	<15	<15	<15
Full Cure	-----8 Hours-----								
Tensile Shear	----- 2700 – 4300 psi -----								
Gap fill (Inches)	.002	.003	.006	.007	.008	.008	.008	.008	.008
Temp. Range	----- -65°F to +200°F -----								

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**Preparation:**

For best results and optimum adhesive performance, surfaces should be clean and free from contaminants. Contaminants can be removed by using suitable solvents. When using a cleaning solvent, first check for material compatibility particularly in the case of plastics. An easy method for removing contaminants is by using a clean cloth and wiping the surface with acetone or alcohol.

**Application:**

The advanced performance series of USP VI Cyanoacrylates should be applied in small amounts to one surface only. The parts should then be mated together under slight pressure. This causes the adhesive to spread out into a thin film and assures optimum adhesive performance. The pressure need only be applied for several seconds. The advanced performance series cures rapidly allowing for bonded parts to be handled within 20 to 60 seconds for most applications. Full cure is normally within 8 hours. In cases where Accelerator is used, fixturing will normally occur in less than 5 seconds with full cure in 2-4 hours.

**Shelf Life:**

All of the USP VI series products have a shelf life of one year when stored at 40°F. Shelf life at room temperature (72°F) is a minimum of six months. When stored in a refrigerator, allow the adhesive to gradually warm to room temperature prior to use. Avoid heat, direct sunlight and high moisture areas when storing. Avoid contaminating open containers

**Handling Precautions:**

All USP VI series products are non-toxic and so do not constitute a health hazard. Normal precautions should be observed. Use in areas where there is adequate ventilation. **KEEP AWAY FROM CHILDREN.**

Accidental skin bonding may occur. Use warm, soapy water to separate skin or use Debonder. Gradually work skin free. Do not use excessive force to pull bonded area apart: this will only result in the tearing of skin and/or cause irritation which is unnecessary.

Should eye contact occur flush with water and see a physician. Do not force the bonded area apart. When the corneal surface and eyelid are bonded together treat with a suitable anti-irritant ointment and allow the eye to remain closed. Bond separation will occur naturally within 48 hours with no damage.