

Revised
January 2003



9411 Corsair Road
Frankfort, IL 60423
1-800-552-0299 Phone
1-815-464-5650 Fax

EMERGENCY PHONE 1-800-255-3924

TECHNICAL DATA SHEETS

SI GEL

Description:

The **ADVANCED PERFORMANCE SERIES** or the **APS** family of products have been specifically designed to meet rigorous demands of today's product assembly requirements. These products are single component, solvent free systems. They cure at room temperature and are rapid setting materials normally curing in just a matter of seconds. They are available in various viscosities and setting times to meet your specific applications needs. The **ADVANCED PERFORMANCE SERIES** has been formulated to bond a wide range of similar and dissimilar materials.

SI GEL is a fast setting, Cyanoacrylate adhesive gel. The **SI SERIES** is formulated to bond difficult substrates. The **SI** product is less dependent on surface moisture for cure speed than most standard CA grades. Under normal conditions, the surface moisture initiates the hardening process.

Properties:

CHEMICAL TYPE: Ethyl Cyanoacrylate
 APPEARANCE: Clear liquid
 SPECIFIC GRAVITY: 1.05 @ 25°C
 VISCOSITY: GEL
 FLASH POINT: > 176°F (80°C)
 GAP FILLING: up to 0.05 inches

Typical Environmental Resistance:

CURE PROCEDURE: One week at 22°C
 SUBSTRATE: Grit Blasted Mild Steel
 PROCEDURE: ASTM D1002/DIN 53283

CHEMICAL / SOLVENT RESISTENCE SOLVENT	AGED TEMP.	(Tested @ 22° C) % INITIAL STRENGTH RETAINED		
		100 HRS.	500 HRS.	1000HRS
MOTOR OIL	40 ° C	85	85	75
LEADED PETROL	22 ° C	100	100	100
ETHANOL	22 ° C	100	100	100
ISOPROPANOL	22 ° C	100	100	100
FREON TA	22 ° C	100	100	100
HUMIDITY 95% RH	40° C	65	55	50
HUMIDITY 95% RH (Polycarbonate)	40° C	100	100	100

The SI GEL cure speed will be dependent upon the substrate used. The table below shows the fixture time achieved on different substrates at 22° C with 50% relative humidity

TIME TO DEVELOP SHEAR STRENGTH OF 0.1 N/MM² (14.5 psi)

SUBSTRATE	FIXTURE TIME (sec)
STEEL	4 to 19
PHENOLIC MATERIAL	2 to 9
POLYCARBONATE	9 to 39
P V C	2 to 9
ABS	2 to 9
NITRILE RUBBER	< 4
NEOPRENE	< 4
ZINC DICHROMATE	9 to 19
ALUMINIUM	2 to 9

TYPICAL PROPERTIES OF CURED MATERIAL Physical Properties

Coefficient of thermal expansion: ASTM C696, K^{-1} 80×10^{-6}
 Coefficient of thermal conductivity: ASTM C177, $W, m^{-1} K^{-1}$ 0.1
 Glass Transition temperature: ASTM E228 25°C 120

Engineering Excellence

For technical information
and support call **1-800-552-0299** or visit our website at

www.instantca.com