



**Cargille Laboratories**  
**55 Commerce Rd - Cedar Grove, NJ 07009-1289**  
**Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com**

Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**  
 Refractive Index **1.50000** at 589.3 nm and 25 °C

Compositition Aliphatic / Alicyclic Hydrocarbons and Hydrogenated Terphenyl  
 Appearance Colorless to light yellow liquid  
 Odor Slight  
 Color Stability In Direct Sun: may slightly darken after 1 day, more after 4 months, dark after 6 years  
 Index Change Rate Low : -0.00002 to +0.00005  
 by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm<sup>2</sup>/cc @ 25 °C

Index at 20°C 1.50200  
 Pour Point < -7 °C  
 Boiling Point > 262 °C ( 760 mm Hg )  
 Flash Point > 138 °C ( COC )  
 Brix Value (Per ICUMSA) 84.3 at 20°C  
 Density 0.894 g / cc at 25 °C  
 Density Temp Coef -0.0007 g / cc / °C  
 Coef of Thermal Expansion 0.0008 cc / cc / °C  
 Thermal Conductivity n/a cal / sec / cm<sup>2</sup> / °C - 1 cm thickness  
 Viscosity 31 cSt at 25 °C 28 cP at 25 °C  
 Surface Tension 31 dynes/cm at 25 °C

Soluble Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene  
 Partly Soluble Acetone, Ethanol  
 Insoluble Water

Compatible 10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone ( Sylgard 184 ) and Fluorosilicone ( 730 RTV ) Rubbers, Tygon F-4040-A, Tygothane; Aluminum, Brass, Copper, Steel  
 Incompatible Polystyrene, Latex, Neoprene, Silicone ( 3140 RTV ) Rubber, Tygon S-50-HL, R-3603, B-44-3



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Cauchy Coefficients  
 A 1.483347E+00 B 5.3891E+03 C 1.3679852E+08

Cauchy Equation at 25°C  $A + B / \lambda^2 + C / \lambda^4$  ( $\lambda$  = Wavelength in nm)

Wavelength (nm)	Refractive Index	Transmittance			
		0.1 mm	1 mm	1 cm	10 cm
225.0	-	-	-	-	-
240.0	-	-	-	-	-
250.0	-	-	-	-	-
270.0	-	-	-	-	-
290.0	-	-	-	-	-
308.0	-	-	-	-	-
355.0	1.535	89	30	0	0
365.0	1.532	98	85	20	0
406.0	1.5211	100	96	69	2
473.0	1.5102	100	100	95	62
532.0	1.5041	100	100	98	83
589.3	1.5000	100	100	99	90
632.8	1.4977	100	100	99	93
656.3	1.4966	100	100	100	95
790.0	1.4923	100	100	100	99
828.0	1.4915	100	100	100	97
981.0	1.489	100	100	96	64
1310.0	1.487	100	99	89	31
1550.0	1.486	100	98	82	15
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0120

Abbe  $v_D$  41.6

Temp. Coefficient -0.000401  $dn_D/dt$  (15 - 35 °C)

Shelf Life: 5 Years from Date of Manufacture for Unopened Bottles, Half the Remaining Time after Opening