



**Cargille Laboratories**  
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**  
 Refractive Index **1.49200** at 589.3 nm and 25 °C

Composition 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 1.49399  
 Pour Point < -7 °C  
 Boiling Point > 262 °C ( 760 mm Hg )  
 Flash Point > 138 °C ( COC )  
 Brix Value (Per ICUMSA) 81.3 at 20°C  
 Density 0.882 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 28 cSt at 25 °C 24 cP at 25 °C  
 Surface Tension 30 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 1.476263E+00 B 5.1260E+03 C 1.1776620E+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	1.524	91	38	0	0
365.0	1.521	99	88	27	0
406.0	1.5117	100	97	73	5
473.0	1.5015	100	100	96	67
532.0	1.4958	100	100	98	85
589.3	1.4920	100	100	99	91
632.8	1.4898	100	100	99	94
656.3	1.4888	100	100	100	95
790.0	1.4848	100	100	100	99
828.0	1.4840	100	100	100	97
981.0	1.482	100	100	95	62
1310.0	1.479	100	99	89	30
1550.0	1.478	100	98	82	14
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0113

Abbe  $v_D$  43.7

Temp. Coefficient -0.000398  $dn_D/dt$  (15 - 35 °C)

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