



**Cargille Laboratories**  
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid      **Series A**  
 Refractive Index              **1.48200**      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              1.48398  
 Pour Point                  < -7 °C  
 Boiling Point              > 262 °C ( 760 mm Hg )  
 Flash Point                > 138 °C ( COC )  
 Brix Value (Per ICUMSA)      77.4 at 20°C  
 Density                      0.866 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                    24 cSt at 25 °C                              21 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



Refractive Index Liquid **Series A**  
 Refractive Index **1.48200** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.467407E+00 B 4.7970E+03 C 9.3975809E+07

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	1.511	93	50	0	0
365.0	1.509	99	91	39	0
406.0	1.5000	100	98	80	11
473.0	1.4907	100	100	97	74
532.0	1.4855	100	100	99	88
589.3	1.4820	100	100	99	92
632.8	1.4800	100	100	99	94
656.3	1.4791	100	100	100	95
790.0	1.4753	100	100	100	99
828.0	1.4746	100	100	100	97
981.0	1.472	100	100	95	61
1310.0	1.470	100	99	89	30
1550.0	1.469	100	98	82	13
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0103

Abbe  $v_D$  46.6

Temp. Coefficient -0.000395  $dn_D/dt$  (15 - 35 °C)

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