



**Cargille Laboratories**  
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**  
Refractive Index **1.58200** at 589.3 nm and 25 °C

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Composition Hydrogenated Terphenyl and 1-Bromonaphthalene  
Appearance Light Yellow Liquid  
Odor Slight: unpleasant  
Color Stability In Direct Sun: may slightly darken after 1 day, very dark after 4 months, dark with precipitate after 6 yrs  
Index Change Rate Low : -0.00003 to +0.00003  
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm<sup>2</sup>/cc @ 25 °C

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Index at 20°C 1.58414  
Pour Point < 6 °C  
Boiling Point > 279 °C ( 760 mm Hg )  
Flash Point > 113 °C ( COC )  
Brix Value (Per ICUMSA) >100 at 20°C  
Density 1.062 g / cc at 25 °C  
Density Temp Coef -0.0007 g / cc / °C  
Coef of Thermal Expansion 0.0007 cc / cc / °C  
Thermal Conductivity n/a cal / sec / cm<sup>2</sup> / °C - 1 cm thickness  
Viscosity 59 cSt at 25 °C 63 cP at 25 °C  
Surface Tension 37 dynes/cm at 25 °C

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Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Ethanol

Insoluble Water

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Compatible 9 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone ( Sylgard 184, 3140 RTV ) and Fluorosilicone ( Siliastic 730 RTV ) Rubbers ; Tygothane, Aluminum, Steel

Incompatible Polycarbonate, Polystyrene, Latex, Neoprene, Tygon ( all types except Tygothane ), ( Acrylic at 55 °C ), may tarnish Brass and Copper.

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Cauchy Coefficients  
 A 1.555445E+00 B 8.1242E+03 C 3.8120468E+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	-	-	-	-	-
365.0	1.638	96	67	2	0
406.0	1.6188	99	91	39	0
473.0	1.5994	100	99	89	30
532.0	1.5889	100	100	96	67
589.3	1.5820	100	100	98	82
632.8	1.5781	100	100	99	89
656.3	1.5764	100	100	99	93
790.0	1.5694	100	100	100	96
828.0	1.5681	100	100	100	97
981.0	1.564	100	100	98	79
1310.0	1.560	100	99	91	39
1550.0	1.559	100	98	86	22
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0203

Abbe  $v_D$  28.7

Temp. Coefficient -0.000428  $dn_D/dt$  (15 - 35 °C)

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