



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

Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**  
Refractive Index **1.60000** at 589.3 nm and 25 °C

---

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

---

Index at 20°C 1.60219  
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 1.166 g / cc at 25 °C  
Density Temp Coef -0.0008 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 31 cSt at 25 °C 36 cP at 25 °C  
Surface Tension 38 dynes/cm at 25 °C

---

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

Partly Soluble Ethanol

Insoluble Water

---

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.

---



Refractive Index Liquid **Series A**  
 Refractive Index **1.60000** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.570434E+00 B 8.7857E+03 C 5.1460912E+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	1.665	97	72	4	0
406.0	1.6427	99	92	43	0
473.0	1.6200	100	99	88	29
532.0	1.6079	100	100	96	69
589.3	1.6000	100	100	98	82
632.8	1.5956	100	100	99	87
656.3	1.5936	100	100	99	90
790.0	1.5858	100	100	99	92
828.0	1.5843	100	100	99	94
981.0	1.580	100	100	98	82
1310.0	1.576	100	99	92	43
1550.0	1.574	100	99	88	27
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0232

Abbe  $v_D$  25.8

Temp. Coefficient -0.000438  $dn_D/dt$  (15 - 35 °C)

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