



**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                            **1.60600**        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                                1.60821  
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                                        1.200 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                                        25 cSt at 25 °C                                29 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 **1.60600** at 589.3 nm and 25 °C

Cauchy Coefficients  
 A 1.575430E+00 B 9.0063E+03 C 5.5907727E+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	1.675	97	73	4	0
406.0	1.6506	99	92	44	0
473.0	1.6269	100	99	88	28
532.0	1.6142	100	100	96	69
589.3	1.6060	100	100	98	82
632.8	1.6014	100	100	99	87
656.3	1.5994	100	100	99	89
790.0	1.5913	100	100	99	91
828.0	1.5898	100	100	99	94
981.0	1.585	100	100	98	83
1310.0	1.581	100	99	92	45
1550.0	1.579	100	99	88	28
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

( $n_F - n_C$ ) 0.0242

Abbe  $v_D$  25.0

Temp. Coefficient -0.000441  $dn_D/dt$  (15 - 35 °C)

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