



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 **1.58400** 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 cm²/cc @ 25 °C

Index at 20°C 1.58614
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 1.074 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 / cm² / °C - 1 cm thickness

Viscosity 55 cSt at 25 °C 59 cP at 25 °C
Surface Tension 37 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 **1.58400** at 589.3 nm and 25 °C

Cauchy Coefficients
 A 1.557110E+00 B 8.1977E+03 C 3.9602740E+08

Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = 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	1.641	96	68	2	0
406.0	1.6214	99	91	39	0
473.0	1.6017	100	99	89	30
532.0	1.5910	100	100	96	67
589.3	1.5840	100	100	98	82
632.8	1.5801	100	100	99	89
656.3	1.5783	100	100	99	93
790.0	1.5713	100	100	100	96
828.0	1.5699	100	100	100	97
981.0	1.566	100	100	98	79
1310.0	1.562	100	99	91	39
1550.0	1.561	100	99	86	22
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0206

Abbe v_D 28.3

Temp. Coefficient -0.000429 dn_D/dt (15 - 35 °C)

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