



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 **1.49400** at 589.3 nm and 25 ° C

Composition 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 cm²/cc @ 25 ° C

Index at 20°C 1.49599
 Pour Point < -7 ° C
 Boiling Point > 262 ° C (760 mm Hg)
 Flash Point > 138 ° C (COC)
 Brix Value (Per ICUMSA) 82.0 at 20°C
 Density 0.885 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 / cm² / ° C - 1 cm thickness
 Viscosity 28 cSt at 25 ° C 25 cP at 25 ° C
 Surface Tension 31 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 **1.49400** at 589.3 nm and 25 °C

Cauchy Coefficients
 A: 1.478034E+00
 B: 5.1917E+03
 C: 1.2252428E+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	1.527	90	36	0	0
365.0	1.524	99	87	25	0
406.0	1.5140	100	97	72	4
473.0	1.5037	100	100	96	66
532.0	1.4979	100	100	98	85
589.3	1.4940	100	100	99	91
632.8	1.4918	100	100	99	94
656.3	1.4907	100	100	100	95
790.0	1.4867	100	100	100	99
828.0	1.4859	100	100	100	97
981.0	1.484	100	100	95	63
1310.0	1.481	100	99	89	30
1550.0	1.480	100	98	82	14
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0115

Abbe v_D 43.1

Temp. Coefficient -0.000399 dn_D/dt (15 - 35 °C)

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