



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 **1.55800** 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 1.56009
Pour Point < -7 ° C
Boiling Point > 262 ° C (760 mm Hg)
Flash Point > 138 ° C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 0.984 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 69 cSt at 25 ° C 68 cP at 25 ° C
Surface Tension 35 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



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Cauchy Coefficients
 A 1.534710E+00 B 7.2969E+03 C 2.7478281E+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	1.610	75	6	0	0
365.0	1.605	96	68	2	0
406.0	1.5891	99	92	42	0
473.0	1.5728	100	99	90	36
532.0	1.5639	100	100	96	69
589.3	1.5580	100	100	98	83
632.8	1.5546	100	100	99	91
656.3	1.5531	100	100	100	95
790.0	1.5471	100	100	100	98
828.0	1.5459	100	100	100	99
981.0	1.543	100	100	97	75
1310.0	1.539	100	99	90	36
1550.0	1.538	100	98	84	19
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0174

Abbe v_D 32.1

Temp. Coefficient -0.000418 dn_D/dt (15 - 35 °C)

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