



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.52400** at 589.3 nm and 25 ° C

Compositition 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 1.52604
 Pour Point < -7 ° C
 Boiling Point > 262 ° C (760 mm Hg)
 Flash Point > 138 ° C (COC)
 Brix Value (Per ICUMSA) 93.0 at 20°C
 Density 0.931 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 43 cSt at 25 ° C 40 cP at 25 ° C
 Surface Tension 32 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 1.504601E+00 B 6.1785E+03 C 1.9389547E+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	1.566	83	15	0	0
365.0	1.562	98	78	8	0
406.0	1.5492	99	94	56	0
473.0	1.5361	100	99	93	49
532.0	1.5289	100	100	97	77
589.3	1.5240	100	100	99	87
632.8	1.5212	100	100	99	92
656.3	1.5200	100	100	100	95
790.0	1.5150	100	100	100	98
828.0	1.5140	100	100	100	98
981.0	1.511	100	100	96	68
1310.0	1.508	100	99	89	33
1550.0	1.507	100	98	83	16
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0142

Abbe v_D 36.8

Temp. Coefficient -0.000408 dn_D/dt (15 - 35 °C)

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