



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.51000** 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 1.51202
 Pour Point < -7 °C
 Boiling Point > 262 °C (760 mm Hg)
 Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 88.0 at 20°C
 Density 0.910 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 35 cSt at 25 °C 32 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



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Cauchy Coefficients
 A 1.492203E+00 B 5.7180E+03 C 1.6058892E+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	1.548	86	23	0	0
365.0	1.544	98	82	14	0
406.0	1.5328	100	95	63	1
473.0	1.5210	100	99	94	56
532.0	1.5144	100	100	98	81
589.3	1.5100	100	100	99	89
632.8	1.5075	100	100	99	93
656.3	1.5063	100	100	100	95
790.0	1.5018	100	100	100	99
828.0	1.5009	100	100	100	97
981.0	1.498	100	100	96	66
1310.0	1.496	100	99	89	32
1550.0	1.495	100	98	83	15
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0129

Abbe v_D 39.4

Temp. Coefficient -0.000404 dn_D/dt (15 - 35 °C)

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