



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.52800** 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 1.53004
 Pour Point < -7 °C
 Boiling Point > 262 °C (760 mm Hg)
 Flash Point > 138 °C (COC)
 Brix Value (Per ICUMSA) 94.4 at 20°C
 Density 0.938 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 46 cSt at 25 °C 43 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 1.508143E+00 B 6.3101E+03 C 2.0341163E+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	1.571	82	14	0	0
365.0	1.567	97	77	7	0
406.0	1.5539	99	94	54	0
473.0	1.5404	100	99	93	48
532.0	1.5330	100	100	97	76
589.3	1.5280	100	100	99	87
632.8	1.5252	100	100	99	92
656.3	1.5239	100	100	100	95
790.0	1.5188	100	100	100	98
828.0	1.5178	100	100	100	98
981.0	1.515	100	100	96	69
1310.0	1.512	100	99	90	33
1550.0	1.511	100	98	83	16
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0146

Abbe v_D 36.2

Temp. Coefficient -0.000409 dn_D/dt (15 - 35 °C)

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