



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.53600** 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 1.53806
 Pour Point < -7 °C
 Boiling Point > 262 °C (760 mm Hg)
 Flash Point > 138 °C (COC)
 Brix Value (Per ICUMSA) 97.2 at 20°C
 Density 0.950 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 51 cSt at 25 °C 48 cP at 25 °C
 Surface Tension 33 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 1.515227E+00 B 6.5733E+03 C 2.2244394E+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	1.581	80	11	0	0
365.0	1.577	97	74	5	0
406.0	1.5633	99	93	50	0
473.0	1.5491	100	99	92	44
532.0	1.5412	100	100	97	74
589.3	1.5360	100	100	98	86
632.8	1.5330	100	100	99	92
656.3	1.5317	100	100	100	95
790.0	1.5263	100	100	100	98
828.0	1.5253	100	100	100	98
981.0	1.522	100	100	97	70
1310.0	1.519	100	99	90	34
1550.0	1.518	100	98	84	17
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0153

Abbe v_D 34.9

Temp. Coefficient -0.000411 dn_D/dt (15 - 35 °C)

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