



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.47600** 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 1.47797
Pour Point < -7 °C
Boiling Point > 262 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 75.0 at 20°C
Density 0.857 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 22 cSt at 25 °C 19 cP at 25 °C
Surface Tension 30 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 1.462094E+00 B 4.5997E+03 C 7.9701571E+07

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	1.504	95	59	1	0
365.0	1.501	99	93	49	0
406.0	1.4929	100	98	84	18
473.0	1.4842	100	100	98	78
532.0	1.4793	100	100	99	90
589.3	1.4760	100	100	99	93
632.8	1.4741	100	100	99	94
656.3	1.4732	100	100	100	95
790.0	1.4697	100	100	100	99
828.0	1.4690	100	100	100	97
981.0	1.467	100	99	95	60
1310.0	1.465	100	99	88	29
1550.0	1.464	100	98	82	13
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0098

Abbe v_D 48.6

Temp. Coefficient -0.000393 dn_D/dt (15 - 35 °C)

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