



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.48400** 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 1.48598
Pour Point < -7 °C
Boiling Point > 262 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 78.2 at 20°C
Density 0.869 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 25 cSt at 25 °C 21 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 1.469179E+00 B 4.8628E+03 C 9.8733888E+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	1.514	93	47	0	0
365.0	1.511	99	90	36	0
406.0	1.5023	100	98	79	9
473.0	1.4929	100	100	97	72
532.0	1.4876	100	100	99	88
589.3	1.4840	100	100	99	92
632.8	1.4819	100	100	99	94
656.3	1.4810	100	100	100	95
790.0	1.4772	100	100	100	99
828.0	1.4765	100	100	100	97
981.0	1.474	100	100	95	61
1310.0	1.472	100	99	89	30
1550.0	1.471	100	98	82	14
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0105

Abbe v_D 46.0

Temp. Coefficient -0.000396 dn_D/dt (15 - 35 °C)

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