



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.47800** 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 1.47997
Pour Point < -7 °C
Boiling Point > 262 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) **75.8 at 20°C**
Density 0.860 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 23 cSt at 25 °C 20 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 1.463865E+00 B 4.6655E+03 C 8.4459650E+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	1.506	94	56	0	0
365.0	1.504	99	92	46	0
406.0	1.4953	100	98	83	15
473.0	1.4864	100	100	97	77
532.0	1.4814	100	100	99	89
589.3	1.4780	100	100	99	93
632.8	1.4760	100	100	99	94
656.3	1.4752	100	100	100	95
790.0	1.4716	100	100	100	99
828.0	1.4708	100	100	100	97
981.0	1.469	100	99	95	60
1310.0	1.467	100	99	88	29
1550.0	1.466	100	98	82	13
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0100

Abbe v_D 47.9

Temp. Coefficient -0.000394 dn_D/dt (15 - 35 °C)

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