



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.50200** 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 by Evaporation	Low : -0.00002 to +0.00005 expected after 32 days with exposed surface area to volume ratio of 0.2 cm ² /cc @ 25 °C

Index at 20°C	1.50401
Pour Point	< -7 °C
Boiling Point	> 262 °C (760 mm Hg)
Flash Point	> 138 °C (COC)
Brix Value (Per ICUMSA)	85.0 at 20°C
Density	0.897 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 / cm ² / °C - 1 cm thickness
Viscosity	32 cSt at 25 °C 28 cP at 25 °C
Surface Tension	31 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 B C
 1.485118E+00 5.4549E+03 1.4155660E+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	1.537	88	29	0	0
365.0	1.534	98	84	18	0
406.0	1.5234	100	96	67	2
473.0	1.5123	100	100	95	61
532.0	1.5062	100	100	98	83
589.3	1.5020	100	100	99	90
632.8	1.4996	100	100	99	93
656.3	1.4985	100	100	100	95
790.0	1.4942	100	100	100	99
828.0	1.4934	100	100	100	97
981.0	1.491	100	100	96	64
1310.0	1.488	100	99	89	31
1550.0	1.487	100	98	83	15
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0122

Abbe v_D 41.2

Temp. Coefficient -0.000401 dn_D/dt (15 - 35 °C)

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