



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.51800** 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	1.52003
Pour Point	< -7 °C
Boiling Point	> 262 °C (760 mm Hg)
Flash Point	> 138 °C (COC)
Brix Value (Per ICUMSA)	90.8 at 20°C
Density	0.922 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 / cm ² / °C - 1 cm thickness
Viscosity	40 cSt at 25 °C 37 cP at 25 °C
Surface Tension	32 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 1.499287E+00 B 5.9812E+03 C 1.7962123E+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	1.558	84	18	0	0
365.0	1.554	98	79	10	0
406.0	1.5422	99	95	59	0
473.0	1.5296	100	99	94	52
532.0	1.5227	100	100	98	79
589.3	1.5180	100	100	99	88
632.8	1.5153	100	100	99	93
656.3	1.5141	100	100	100	95
790.0	1.5093	100	100	100	98
828.0	1.5084	100	100	100	98
981.0	1.506	100	100	96	67
1310.0	1.503	100	99	89	32
1550.0	1.502	100	98	83	16
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0137

Abbe v_D 37.9

Temp. Coefficient -0.000406 dn_D/dt (15 - 35 °C)

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