



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
 Refractive Index **1.55200** at 589.3 nm and 25 °C

Compositition 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 1.55408
 Pour Point < -7 °C
 Boiling Point > 262 °C (760 mm Hg)
 Flash Point > 138 °C (COC)
 Brix Value (Per ICUMSA) >100 at 20°C
 Density 0.975 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 / cm² / °C - 1 cm thickness
 Viscosity 64 cSt at 25 °C 62 cP at 25 °C
 Surface Tension 34 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 1.529396E+00 B 7.0996E+03 C 2.6050858E+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	1.602	77	7	0	0
365.0	1.597	96	70	3	0
406.0	1.5821	99	92	44	0
473.0	1.5663	100	99	91	38
532.0	1.5577	100	100	97	71
589.3	1.5520	100	100	98	84
632.8	1.5488	100	100	99	91
656.3	1.5473	100	100	100	95
790.0	1.5414	100	100	100	98
828.0	1.5403	100	100	100	98
981.0	1.537	100	100	97	73
1310.0	1.534	100	99	90	35
1550.0	1.532	100	98	84	18
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0168

Abbe v_D 32.8

Temp. Coefficient -0.000416 dn_D/dt (15 - 35 °C)

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