



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.53000** 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 1.53205
Pour Point < -7 °C
Boiling Point > 262 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 95.1 at 20°C
Density 0.941 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 47 cSt at 25 °C 44 cP at 25 °C
Surface Tension 33 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 1.509914E+00 B 6.3759E+03 C 2.0816971E+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	1.574	82	13	0	0
365.0	1.570	97	76	6	0
406.0	1.5563	99	94	53	0
473.0	1.5426	100	99	93	47
532.0	1.5350	100	100	97	76
589.3	1.5300	100	100	99	86
632.8	1.5271	100	100	99	92
656.3	1.5258	100	100	100	95
790.0	1.5207	100	100	100	98
828.0	1.5197	100	100	100	98
981.0	1.517	100	100	96	69
1310.0	1.514	100	99	90	33
1550.0	1.513	100	98	84	16
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0148

Abbe v_D 35.8

Temp. Coefficient -0.000409 dn_D/dt (15 - 35 °C)

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