



Cargille Laboratories
55 Commerce Rd - Cedar Grove, NJ 07009-1289
Phone : 973-239-6633 - Fax : 973-239-6096 - Web : www.cargille.com

Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.45600** at 589.3 nm and 25 ° C

Composition Siloxane and Aliphatic / Alicyclic Hydrocarbons
Appearance Colorless Liquid
Odor None
Color Stability In Direct Sun: no visible change after 10 years
Index Change Rate Very Low : 0.00000 to +0.00001
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.45794
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 66.9 at 20°C
Density 0.831 g / cc at 25 °C
Density Temp Coef -0.0007 g / cc / °C
Coef of Thermal Expansion 0.0008 cc / cc / °C
Thermal Conductivity 0.0003 cal / sec / cm² / °C - 1 cm thickness

Viscosity 17 cSt at 25 °C 14 cP at 25 °C
Surface Tension 26 dynes/cm at 25 °C

Soluble Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Acetone

Insoluble Ethanol, Water

Compatible 1 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene and Fluorosilicone (Silastic 730 RTV) Rubbers ; Tygon F-4040-A, Tygothane, Aluminum, Brass, Copper, Steel

Incompatible Latex, Silicone (Sylgard 184 and 3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3



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Cauchy Coefficients
 A 1.444195E+00 B 4.0028E+03 C 3.3660855E+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	1.54	94	52	0	0
240.0	1.52	99	88	28	0
250.0	1.52	99	94	51	0
270.0	1.51	99	90	33	0
290.0	1.50	100	98	84	17
308.0	1.49	100	98	84	17
355.0	1.478	100	100	98	82
365.0	1.476	100	100	99	86
406.0	1.4697	100	100	99	86
473.0	1.4628	100	100	99	93
532.0	1.4588	100	100	100	95
589.3	1.4560	100	100	100	95
632.8	1.4544	100	100	100	95
656.3	1.4537	100	100	100	95
790.0	1.4507	100	100	100	99
828.0	1.4501	100	100	100	96
981.0	1.448	100	99	95	57
1310.0	1.447	100	99	88	29
1550.0	1.446	100	98	80	11
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0081

Abbe v_D 56.5

Temp. Coefficient -0.000389 dn_D/dt (15 - 35 °C)

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