



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 **1.40800** 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 1.41004
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 45.1 at 20°C
Density 0.916 g / cc at 25 °C
Density Temp Coef -0.0009 g / cc / °C
Coef of Thermal Expansion 0.0010 cc / cc / °C
Thermal Conductivity 0.0003 cal / sec / cm² / °C - 1 cm thickness

Viscosity 11 cSt at 25 °C 10 cP at 25 °C
Surface Tension 19 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 1.395916E+00 B 4.2926E+03 C -3.3335856E+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	1.47	97	74	5	0
240.0	1.46	99	91	38	0
250.0	1.46	99	92	43	0
270.0	1.45	99	94	55	0
290.0	1.44	100	98	79	9
308.0	1.44	100	99	90	34
355.0	1.428	100	100	99	89
365.0	1.426	100	100	100	97
406.0	1.4207	100	100	100	97
473.0	1.4144	100	100	100	98
532.0	1.4107	100	100	100	98
589.3	1.4080	100	100	100	98
632.8	1.4064	100	100	100	98
656.3	1.4057	100	100	100	98
790.0	1.4027	100	100	100	99
828.0	1.4021	100	100	99	91
981.0	1.400	100	100	98	79
1310.0	1.398	100	99	95	58
1550.0	1.398	100	96	65	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0078

Abbe v_D 52.4

Temp. Coefficient -0.000408 dn_D/dt (15 - 35 °C)

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