



Cargille Laboratories
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.42600** 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 1.42800
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) **53.7 at 20°C**
Density 0.884 g / cc at 25 °C
Density Temp Coef -0.0008 g / cc / °C
Coef of Thermal Expansion 0.0009 cc / cc / °C
Thermal Conductivity 0.0003 cal / sec / cm² / °C - 1 cm thickness

Viscosity 13 cSt at 25 °C 11 cP at 25 °C
Surface Tension 20 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 1.414020E+00 B 4.1839E+03 C -8.2120893E+06

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	1.49	96	65	1	0
240.0	1.48	99	90	34	0
250.0	1.48	99	92	46	0
270.0	1.47	99	92	45	0
290.0	1.46	100	98	81	11
308.0	1.46	100	99	88	27
355.0	1.447	100	100	99	86
365.0	1.445	100	100	99	93
406.0	1.4391	100	100	99	93
473.0	1.4326	100	100	100	96
532.0	1.4287	100	100	100	97
589.3	1.4260	100	100	100	97
632.8	1.4244	100	100	100	97
656.3	1.4237	100	100	100	97
790.0	1.4207	100	100	100	99
828.0	1.4201	100	100	99	93
981.0	1.418	100	100	96	70
1310.0	1.416	100	99	92	45
1550.0	1.416	100	97	71	3
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0079

Abbe v_D 54.0

Temp. Coefficient -0.000401 dn_D/dt (15 - 35 °C)

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