



Cargille Laboratories
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.42200** 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 1.42401
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) **51.9 at 20°C**
Density 0.891 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 12 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 1.409997E+00 B 4.2081E+03 C -1.3795148E+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	1.49	96	67	2	0
240.0	1.48	99	90	35	0
250.0	1.47	99	92	45	0
270.0	1.47	99	93	47	0
290.0	1.46	100	98	80	11
308.0	1.45	100	99	88	28
355.0	1.443	100	100	99	87
365.0	1.441	100	100	99	94
406.0	1.4350	100	100	99	94
473.0	1.4285	100	100	100	97
532.0	1.4247	100	100	100	97
589.3	1.4220	100	100	100	97
632.8	1.4204	100	100	100	97
656.3	1.4197	100	100	100	97
790.0	1.4167	100	100	100	99
828.0	1.4161	100	100	99	93
981.0	1.414	100	100	97	72
1310.0	1.412	100	99	93	47
1550.0	1.412	100	96	70	3
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0079

Abbe v_D 53.6

Temp. Coefficient -0.000403 dn_D/dt (15 - 35 °C)

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