



Cargille Laboratories
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
 Refractive Index **1.43000** 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 1.43200
 Pour Point < -7 °C
 Boiling Point > 200 °C (760 mm Hg)
 Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 55.5 at 20°C
 Density 0.877 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 12 cP at 25 °C
 Surface Tension 21 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 1.418043E+00 B 4.1598E+03 C -2.6290301E+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	1.50	96	63	1	0
240.0	1.49	99	90	33	0
250.0	1.48	99	93	46	0
270.0	1.47	99	92	44	0
290.0	1.47	100	98	81	12
308.0	1.46	100	99	87	25
355.0	1.451	100	100	98	86
365.0	1.449	100	100	99	92
406.0	1.4432	100	100	99	92
473.0	1.4366	100	100	100	96
532.0	1.4327	100	100	100	97
589.3	1.4300	100	100	100	97
632.8	1.4284	100	100	100	97
656.3	1.4277	100	100	100	97
790.0	1.4247	100	100	100	99
828.0	1.4241	100	100	99	93
981.0	1.422	100	100	96	68
1310.0	1.420	100	99	92	42
1550.0	1.420	100	97	72	4
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0079

Abbe v_D 54.3

Temp. Coefficient -0.000399 dn_D/dt (15 - 35 °C)

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