



Cargille Laboratories
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.40000** 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 1.40206
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) 41.1 at 20°C
Density 0.930 g / cc at 25 °C
Density Temp Coef -0.0010 g / cc / °C
Coef of Thermal Expansion 0.0010 cc / cc / °C
Thermal Conductivity 0.0003 cal / sec / cm² / °C - 1 cm thickness
Viscosity 10 cSt at 25 °C 9 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 1.387869E+00 B 4.3409E+03 C -4.4501974E+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	1.46	98	79	9	0
240.0	1.45	99	91	40	0
250.0	1.45	99	92	41	0
270.0	1.44	99	95	60	1
290.0	1.43	100	98	78	8
308.0	1.43	100	99	91	38
355.0	1.420	100	100	99	90
365.0	1.418	100	100	100	99
406.0	1.4126	100	100	100	99
473.0	1.4064	100	100	100	99
532.0	1.4027	100	100	100	99
589.3	1.4000	100	100	100	99
632.8	1.3984	100	100	100	99
656.3	1.3977	100	100	100	99
790.0	1.3947	100	100	100	99
828.0	1.3941	100	100	99	91
981.0	1.392	100	100	98	83
1310.0	1.390	100	100	96	66
1550.0	1.390	100	96	63	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0077

Abbe v_D 51.7

Temp. Coefficient -0.000412 dn_D/dt (15 - 35 °C)

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