



Cargille Laboratories
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Catalog # 1806

Typical Characteristics

Refractive Index Liquid **Series AA**
Refractive Index **1.40600** 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 1.40805
Pour Point < -7 °C
Boiling Point > 200 °C (760 mm Hg)
Flash Point > 138 °C (COC)
Brix Value (Per ICUMSA) **44.1 at 20°C**
Density 0.920 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 1.393904E+00 B 4.3047E+03 C -3.6127385E+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	97	75	6	0
240.0	1.46	99	91	38	0
250.0	1.45	99	92	42	0
270.0	1.45	99	94	56	0
290.0	1.44	100	98	78	9
308.0	1.44	100	99	90	35
355.0	1.426	100	100	99	89
365.0	1.424	100	100	100	97
406.0	1.4187	100	100	100	97
473.0	1.4124	100	100	100	98
532.0	1.4087	100	100	100	99
589.3	1.4060	100	100	100	99
632.8	1.4044	100	100	100	99
656.3	1.4037	100	100	100	99
790.0	1.4007	100	100	100	99
828.0	1.4001	100	100	99	91
981.0	1.398	100	100	98	80
1310.0	1.396	100	99	95	60
1550.0	1.396	100	96	65	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0078

Abbe v_D 52.2

Temp. Coefficient -0.000409 dn_D/dt (15 - 35 °C)

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