



Cargille Laboratories
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Catalog # 1812

Typical Characteristics

Refractive Index Liquid **Series B**
Refractive Index **1.70000** at 589.3 nm and 25 °C

Compositon 1-Iodonaphthalene and Sulfur
Appearance Light yellow brown liquid
Odor Slight: unpleasent
Color Stability In Direct Sun: may become very dark after 1 day
Index Change Rate Low : +0.00001 to +0.00005
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Pour Point < 6 °C
Boiling Point > 279 °C (760 mm Hg)
Flash Point > 93 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 1.729 g / cc at 25 °C
Density Temp Coef -0.0010 g / cc / °C
Coef of Thermal Expansion 0.0006 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness
Viscosity 4 cSt at 25 °C 7 cP at 25 °C
Surface Tension 41 dynes/cm at 25 °C

Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene
Partly Soluble Ethanol
Insoluble Water

Compatible 1 Month Immersion at 25 °C : Acrylic, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Phenolic, Teflon, Silicone (Sylgard 184, 3140 RTV) and Fluorosilicone (730 RTV) Rubbers, Aluminum

Incompatible Cellulose Acetate, Epoxy, Polycarbonate, Polystyrene, Polyvinyl Chloride, Latex, Neoprene, Tygon (all types), may corrode Brass and Steel, may tarnish Copper.



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Cauchy Coefficients A B C
 1.6557462 12175.5 1.108734E+09

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	-	-	-	-	-
240.0	-	-	-	-	-
248.0	-	-	-	-	-
270.0	-	-	-	-	-
290.0	-	-	-	-	-
308.0	-	-	-	-	-
337.0	-	-	-	-	-
365.0	1.810	94	54	0	0
480.0	1.72948	96	63	1	0
486.1	1.72713	99	89	31	0
546.1	1.70904	100	99	92	41
589.3	1.70000	100	99	94	54
643.8	1.69158	100	100	96	67
656.3	1.68999	100	100	97	74
700.0	1.68521	100	100	98	86
800.0	1.677	100	100	99	90
1300.0	1.663	100	100	99	90
1550.0	1.661	100	100	98	82
1750.0	1.660	100	99	93	51
2000.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0371

Abbe v_D 18.8

Temp. Coefficient -0.000480 dn_D/dt (15 - 35 °C)

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