



Cargille Laboratories
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Catalog # 1809

Typical Characteristics

Refractive Index Liquid **Series A**
Refractive Index **1.60400** at 589.3 nm and 25 ° C

Composition Hydrogenated Terphenyl and 1-Bromonaphthalene
Appearance Light Yellow Liquid
Odor Slight: unpleasant
Color Stability In Direct Sun: may slightly darken after 1 day, very dark after 4 months, dark with precipitate after 6 yrs
Index Change Rate Low : -0.00003 to +0.00003
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.60620
Pour Point < 6 °C
Boiling Point > 279 °C (760 mm Hg)
Flash Point > 113 °C (COC)
Brix Value (Per ICUMSA) >100 at 20°C
Density 1.188 g / cc at 25 °C
Density Temp Coef -0.0008 g / cc / °C
Coef of Thermal Expansion 0.0007 cc / cc / °C
Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness

Viscosity 26 cSt at 25 °C 31 cP at 25 °C
Surface Tension 38 dynes/cm at 25 °C

Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

Partly Soluble Ethanol

Insoluble Water

Compatible 9 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polyester, Polyethylene, Polypropylene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone (Sylgard 184, 3140 RTV) and Fluorosilicone (Siliastic 730 RTV) Rubbers ; Tygothane, Aluminum, Steel

Incompatible Polycarbonate, Polystyrene, Latex, Neoprene, Tygon (all types except Tygothane), (Acrylic at 55 °C), may tarnish Brass and Copper.



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Cauchy Coefficients
 A 1.573765E+00 B 8.9327E+03 C 5.4425456E+08

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	-	-	-	-	-
250.0	-	-	-	-	-
270.0	-	-	-	-	-
290.0	-	-	-	-	-
308.0	-	-	-	-	-
355.0	-	-	-	-	-
365.0	1.671	97	73	4	0
406.0	1.6480	99	92	44	0
473.0	1.6246	100	99	88	29
532.0	1.6121	100	100	96	69
589.3	1.6040	100	100	98	82
632.8	1.5995	100	100	99	87
656.3	1.5974	100	100	99	90
790.0	1.5895	100	100	99	91
828.0	1.5880	100	100	99	94
981.0	1.584	100	100	98	82
1310.0	1.579	100	99	92	44
1550.0	1.578	100	99	88	28
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0239

Abbe v_D 25.3

Temp. Coefficient -0.000440 dn_D/dt (15 - 35 °C)

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