



Cargille Laboratories
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Typical Characteristics

Immersion Liquid **4550**
Refractive Index **1.45600** at 5893 Å and 25 °C

Compostition Aliphatic / Alicyclic Hydrocarbons
Appearance Colorless Liquid
Odor None
Color Stability In sun: no visible change after 10 years
Index Change Rate Very Low : no index change
by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Pour Point < 2 °C
Boiling Point > 244 °C (760 mm Hg)
Flash Point > 135 °C (COC)

Density 0.826 g / cc at 25 °C
Density Temp Coef -0.0007 g / cc / °C
Coef of Thermal Expansion 0.0008 cc / cc / °C
Thermal Conductivity 0.00024 cal / sec / cm² / °C - 1 cm thickness

Viscosity 15 cSt at 25 °C
Surface Tension 29 dynes/cm at 25 °C

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

Partly Soluble Acetone

Insoluble Ethanol, Water

Compatible 10 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene, Fluorosilicone (Silastic 730 RTV) Rubber, Silicone (Sylgard 184) ; Tygon F-4040-A, Tygothane, Aluminum, Brass, Copper, Steel

Incompatible Latex, Silicone (3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3 ; (Polystyrene at 55 °C)

Toxicity None (Request MSDS)



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Cauchy Coefficients
 A 1.4441547 B 403424 C 2.755252E+11

Cauchy Formula $A + B / \lambda^2 + C / \lambda^4$ (λ = Wavelength in Angstroms)

Wavelength (in Å)	Refractive Index	Transmittance			
		0.1 mm	1 mm	1 cm	10 cm
2250	1.53	94	55	0	0
2400	1.52	99	89	31	0
2480	1.52	99	94	52	0
2700	1.505	99	91	38	0
2900	1.496	100	98	84	17
3080	1.490	100	99	86	23
3370	1.482	100	100	98	83
3650	1.4760	100	100	99	87
4047	1.4698	100	100	99	88
4861	1.4617	100	100	99	94
5461	1.4580	100	100	100	96
5893	1.4560	100	100	100	96
6328	1.4544	100	100	100	96
6563	1.4537	100	100	100	96
6943	1.4526	100	100	100	99
8400	1.4499	100	100	100	96
10648	1.4477	100	99	95	57
13000	1.447	100	99	88	29
15500	1.446	100	98	82	13
25000	-	-	-	-	-
37000	-	-	-	-	-

($n_F - n_C$) 0.0081

Abbe v_D 56.6

Temp. Coefficient -0.000389 dn_D/dt (15 - 35 °C)