Cargille Laboratories
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Catalog # 1803

Typical Characteristics
Refractive Index Liquid **Series AAA**
Refractive Index **1.38500** at 589.3 nm and 25 ° C

Compostition	Perfluorocarbon and Chlorofluorocarbon (not the types thought to affect the ozone)
Appearance	Colorless Liquid
Odor	None
Color Stability	In Direct Sun: no visible change after 10 years
Index Change Rate by Evaporation	Moderate : -0.00030 to +0.00009 expected after 32 days with exposed surface area to volume ratio of 0.2 cm^2/cc @ 25 °C

Index at 20°C	1.38672		
Pour Point	< -20	°C	
Boiling Point	> 215	°C	(760 mm Hg)
Flash Point	None	°C	(COC)
Brix Value (Per ICUMSA)	33.1	at 20°C	
Density	1.907	g / cc at 25 °C	
Density Temp Coef	-0.0017	g / cc / °C	
Coef of Thermal Expansion	0.0009	cc / cc / °C	
Thermal Conductivity	0.00038	cal / sec / cm^2 / °C	- 1 cm thickness
Viscosity	17	cSt at 25 °C	32 cP at 25 °C
Surface Tension	19	dynes/cm at 25 °C	

Soluble	Other Chlorofluorocarbons, Galden PFS2, Fluoroclean HE
Partly Soluble	Most organic solvents
Insoluble	Water

Compatible	10 Month Immersion at 25 °C: Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Latex, Neoprene, Silicone (Sylgard 184, 3140 RTV), and Fluorosilicone (Silastic 730 RTV) Rubbers ; Tygon F-4040-A, Tygothane, Brass, Copper, Steel
Incompatible	Burna-S, Natural, and some Silicone Rubbers; Tygon S-50-HL, R-3603, B-44-3; Chlorotrifluoro Ethylene Polymers, Aluminum

The above values are typical for this liquid and are calculated from values typical of its components

9/12/2018

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Cauchy Coefficients

A	B	C
1.376260E+00	3.1763E+03	-4.9025981E+07

Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = Wavelength in nm)

		Transmittance			
Wavelength (nm)	Refractive Index	0.1 mm	1 mm	1 cm	10 cm
225.0	-	-	-	-	-
240.0	1.42	99	88	29	0
250.0	1.41	99	94	51	0
270.0	1.41	100	97	73	4
290.0	1.41	100	98	82	14
308.0	1.40	100	99	88	27
355.0	1.398	100	99	93	49
365.0	1.397	100	100	96	67
406.0	1.3937	100	100	97	74
473.0	1.3895	100	100	99	92
532.0	1.3869	100	100	99	92
589.3	1.3850	100	100	99	94
632.8	1.3839	100	100	100	96
656.3	1.3834	100	100	100	96
790.0	1.3812	100	100	100	97
828.0	1.3808	100	100	100	97
981.0	1.380	100	100	100	97
1310.0	1.378	100	100	100	97
1550.0	1.378	100	100	99	94
2500.0	1.38	100	99	94	54
3700.0	1.38	99	89	30	0

($n_F - n_C$) 0.0055
Abbe v_D 70.6
Temp. Coefficient -0.000344 dn_D/dt (15 - 35 °C)

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

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9/12/2018