Cargille Laboratories
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Catalog # 1803

Typical Characteristics						
Refractive Index Liquid	**Series AAA**					
Refractive Index	**1.35500**	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	1.35670			
Pour Point	< -20	°C		
Boiling Point	> 215	°C (760 mm Hg)		
Flash Point	None	°C (COC)		
Brix Value (Per ICUMSA)	15.6	at 20°C		
Density	1.919	g / cc at 25 °C		
Density Temp Coef	-0.0019	g / cc / °C		
Coef of Thermal Expansion	0.0010	cc / cc / °C		
Thermal Conductivity	0.00031	cal / sec / cm^2 / °C - 1 cm thickness		
Viscosity	16	cSt at 25 °C	30	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

Refractive Index Liquid **Series AAA**
Refractive Index **1.35500** at 589.3 nm and 25 ° C

Cauchy Coefficients

A	B	C
1.347069E+00	2.9789E+03	-7.8052714E+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	1.38	99	90	36	0
250.0	1.37	99	94	56	0
270.0	1.37	100	98	79	9
290.0	1.37	100	99	87	25
308.0	1.37	100	99	91	40
355.0	1.366	100	100	95	61
365.0	1.365	100	100	97	76
406.0	1.3623	100	100	98	81
473.0	1.3588	100	100	99	94
532.0	1.3566	100	100	99	94
589.3	1.3550	100	100	100	96
632.8	1.3540	100	100	100	97
656.3	1.3536	100	100	100	97
790.0	1.3516	100	100	100	98
828.0	1.3512	100	100	100	96
981.0	1.350	100	100	100	96
1310.0	1.349	100	100	100	96
1550.0	1.348	100	100	99	90
2500.0	1.35	100	99	92	41
3700.0	1.35	98	82	13	0

($n_F - n_C$) 0.0047
Abbe v_D 75.3
Temp. Coefficient -0.000340 dn_D/dt (15 - 35 °C)

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

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

9/12/2018