Cargille Laboratories
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Catalog # 1806

Typical Characteristics						
Refractive Index Liquid	**Series AA**					
Refractive Index	**1.40600**	at	589.3 nm	and	25	° C

Compostition	Siloxane and Aliphatic / Alicyclic Hydrocarbons
Appearance	Colorless Liquid
Odor	None
Color Stability	In Direct Sun: no visible change after 10 years
Index Change Rate by Evaporation	Very Low : 0.00000 to +0.00001 expected after 32 days with exposed surface area to volume ratio of 0.2 cm^2/cc @ 25 °C

Index at 20°C	1.40805			
Pour Point	< -7	°C		
Boiling Point	> 200	°C (760 mm Hg)		
Flash Point	> 138	°C (COC)		
Brix Value (Per ICUMSA)	44.1	at 20°C		
Density	0.920	g / cc at 25 °C		
Density Temp Coef	-0.0009	g / cc / °C		
Coef of Thermal Expansion	0.0010	cc / cc / °C		
Thermal Conductivity	0.0003	cal / sec / cm^2 / °C - 1 cm thickness		
Viscosity	11	cSt at 25 °C	10	cP at 25 °C
Surface Tension	19	dynes/cm at 25 °C		

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

Compatible	1 Month Immersion at 25 °C : Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Neoprene and Fluorosilicone (Silastic 730 RTV) Rubbers ; Tygon F-4040-A, Tygothane, Aluminum, Brass, Copper, Steel
Incompatible	Latex, Silicone (Sylgard 184 and 3140 RTV) Rubber, Tygon S-50-HL, R-3603, B-44-3

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

9/12/2018

Refractive Index Liquid **Series AA**
Refractive Index **1.40600** at 589.3 nm and 25 ° C

Cauchy Coefficients	A	B	C
	1.393904E+00	4.3047E+03	-3.6127385E+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	1.46	97	75	6	0
240.0	1.46	99	91	38	0
250.0	1.45	99	92	42	0
270.0	1.45	99	94	56	0
290.0	1.44	100	98	78	9
308.0	1.44	100	99	90	35
355.0	1.426	100	100	99	89
365.0	1.424	100	100	100	97
406.0	1.4187	100	100	100	97
473.0	1.4124	100	100	100	98
532.0	1.4087	100	100	100	99
589.3	1.4060	100	100	100	99
632.8	1.4044	100	100	100	99
656.3	1.4037	100	100	100	99
790.0	1.4007	100	100	100	99
828.0	1.4001	100	100	99	91
981.0	1.398	100	100	98	80
1310.0	1.396	100	99	95	60
1550.0	1.396	100	96	65	1
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

$(n_F - n_C)$	0.0078	
Abbe v_D	52.2	
Temp. Coefficient	-0.000409	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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