

CARGILLE LABORATORIES

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FUSED SILICA MATCHING LIQUID CODE 06350

30-NOV-17

n (589.3nm) 25°C = 1.4587

TYPICAL CHARACTERISTICS

COMPOSITION Aliphatic and Alicyclic Hydrocarbons
APPEARANCE Colorless Liquid
COLOR STABILITY IN DIRECT SUN No visible change after 10 years
INDEX CHANGE RATE BY EVAPORATION Very Low: 0.00002 expected
 exposed surface area to volume ratio of 0.2 cm²/cc @ 25°C for 32 days
ODOR None
FREEZING POINT °C < -18
BOILING POINT °C @ 760mm Hg > 343
FLASH POINT °C C.O.C. > 216
DENSITY g/cc @ 25°C 0.824
DENSITY TEMP. COEFFICIENT g/cc/°C -0.0006
COEF. OF THERM. EXP. cc/cc/°C 0.0008
VISCOSITY @ 25°C 80 cSt
SURFACE TENSION dynes/cm @ 25°C..... 29
SOLUBLE: Carbon Tetrachloride, Diethyl Ether, Freon TF, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene
PARTLY SOLUBLE: Acetone
INSOLUBLE: Ethanol, Water
COMPATIBLE 6-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), Silicone (Sylgard 184, 3140 RTV) Rubbers, Tygon F-4040-A, Tygothane, Aluminum, Copper, Brass, Steel; (tests done on one example of each).
INCOMPATIBLE: Latex Rubber, Tygon except F-4040-A

CAUCHY EQUATION: Refractive index as a function of wavelength at 25.0°C

W = wavelength (nm)

$$n(W) = 1.44719 + (3.83343E+03) / W^2 + (5.66134E+07) / W^4$$

SOURCE OR SPECTRAL LINE	WAVELENGTH (nm)	REFRACTIVE INDEX 25°C	% TRANSMITTANCE 25°C		
			1 mm	1 cm	10 cm
near UV cut off	225	1.55	1	0	0
excimer	248	1.52	1	0	0
local dip	270	1.51	84	18	0
Excimer	308	1.494	99	92	42
N Laser	337	1.485	99	95	60
i (Hg)	365	1.4792	100	98	78
F (H)	486.1	1.4644	100	100	95
e (Hg)	546.1	1.4607	100	100	99
D (Na:D1,D2 mean)	589.3	1.4587	100	100	99
HeNe Laser	632.8	1.4571	100	100	99
C (H)	656.3	1.4564	100	100	100
GaAs laser	840	1.4527	100	99	91
Nd: YAG laser	1064.8	1.451	99	95	60
Diode	1300	1.449	99	88	27
Diode	1550	1.449	98	79	9
n _F - n _C	=	0.0080			
Abbe v _D : (n _D - 1)/(n _F - n _C)	=	57.1			
Temp. coef: dn _D /dt 15 - 35°C	=	-0.000365			