CARGILLE

May 15, 2004

OPTICAL GEL CODE 0608

n (5893 Å) 25 °C = 1.457

TYPICAL CHARACTERISTICS

COMPOSITION	Aliphatic Hydrocarbons & Gelling Agents
APPEARANCE	Colorless Gel
ODOR	None
COLOR STABILITY	In sun: no visible change after 9 years
INDEX CHANGE RATE BY EVAPORATION	Very low: 0.0000 expected:

exposed surface area to volume ratio of 0.2 sq. cm / cc @ 25 °C for 32 days

FREEZING POINT °C	-67
BOILING POINT °C @ 760mm Hg	> 416
FLASH POINT °C COC	> 245
DENSITY g / cc @ 25 °C	0.878
DENSITY TEMP. COEF. g / cc / °C	-0.0007
COEF. OF THERM. EXP. cc / cc °C	0.0008
VISCOSITY @ 25 °C	Soft Gel
OIL SEPARATION 100 °C for 24 Hours, % by Weight	< 0.05
WEIGHT LOSS 100 °C for 24 Hours, %	< 0.05
WATER IMMERSION	No Effect

PARTLY SOLUBLE: Carbon Tetrachloride, Ethyl Ether, Freon TF, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene

INSOLUBLE: Acetone, Ethanol, Water CLEAN UP; Wipe surfaces clean, then use soap and water.

COMPATIBLE 10 month immersion @ 25 °C: Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon; Silicone and Fluorosilicone Rubber; Neoprene Rubber, Aluminum, Copper, Brass, and Steel; (tests done on one example of each)

INCOMPATIBLE: Latex Rubber, Tygon (types: S-50-HL, R-3603, B-44-3)

TOXICITY ..... Low (request MSDS)

CAUCHY EQUATION: refractive index as a function of wavelength at 25 °C

W = wavelength in angstroms (Å)

$n(W) = 1.44514 + (431760) / W^2 + (-1.80659E+11) / W^4$

SOURCE OR SPECTRAL LINE	WAVELENGTH (angstroms)	REFRACTIVE INDEX 25 °C	% TRANSMITTANCE 25 °C 1mm	1 cm	10cm
near UV cut off	3200	1.486	70	3	0
i (Hg)	3650	1.477	98	84	16
h (Hg)	4047	1.471	99	91	40
F**?** (Cd)	4800	1.464	100	97	71
F (H)	4861	1.463	100	97	72
e (Hg)	5461	1.459	100	98	80
D (Na D1, D2 mean)	5893	1.457	100	99	90
HeNe laser	6328	1.456	100	99	92
C? (Cd)	6439	1.455	100	100	95
C (H)	6563	1.455	100	100	96
Ruby Laser	6943	1.454	100	100	99
GaAs laser	8400	1.451	100	100	99
Nd: YAG laser	10648	1.449	100	97	74
Diode	13000	1.448	99	91	39
Diode	15500	1.447	98	83	16

$n_F - n_C$	=	0.008
Abbe ν_D : $(n_D-1) / (n_F-n_C)$	=	57
Temp. Coef: dn_D / dt 15-35 °C	=	-0.00035

CARGILLE LABORATORIES INC.

55 Commerce Road, Cedar Grove, NJ 07009-1289 U.S.A.

Phone: 973-239-6633 / Fax: 973-239-6096 / URL : www.cargille.com