Optical Gel OG-1001

Optical Coupling Gel for Fiber Optic Connectors

The ***Luxlink***™.OG-1001 is a non-curing optical coupling gel. This is a stable index-matching synthetic gel with a wide temperature range. The index of this gel is 1.457, which matches the index for silica glass (fiber optic cable). The gel is transparent to radiation in the near UV, the visible, and the near infrared. Use of the gel is to minimize reflection at air gap between fiber optic end faces. Designed for high optical clarity with absorption loss less then 0.0005% per micron of path length. Ultra filtered so that no particles larger then 34 um, nor more then 300 particles greater then 1 um per cubic centimeter. Sold in 0.4 oz containers.

Technical Specifications

Refractive Index	n (5893 Angstroms) 25°C = 1.457
Cauchy equation (at 25 °C)	n (W) = 1.44514 + (431760) / W^2 + (-1.80659E+11) / W^4 where W =wavelength in angstroms
Composition	Aliphatic Hydrocarbons & Gelling Agent
Appearance	Colorless Gel
Odor	None
Color Stability	In sun: no Visible chang after 9 years
Index change rate by evaporation	Very Low: 0.0000 expected: exposed surface area to volume ration of 0.2 sq. cm / cc @ 25°C for 32 days
Operating Temperture	-20°C to +100°C
Freezing Point	-67°C
Boiling Point	>416°C @ 760mm Hg
Flash Point	>245°C COC
Density	0.878 g/cc @ 25°C
Density Temp. Coef	-0.0007 g/cc/ °C
Coef of Thermal expansion	0.0008 cc/cc °C
Temp. Coef:	dnD / dt 15-35 °C = -0.00035
Viscosity	Soft Gel @ 25°C
Insoluble	Acetone, Ethanol, Water
Partly Soluble	Carbon Tetrachloride, Ethyl Ether, Freon TF, Heptane, Methylene Chloride, Naphtha, Toluene, Turpentine, Xylene
Clean Up	Wipe surfaces clean, then use soap and water.
Toxicity	Low (request MSDS)
Incompatible	Latex Rubber, Tygon (types S-50-HL, R-3603, B44-3)
Compatible 10 month immersion @ 25°C	Acrylic, Cellulose Acetate, Epoxy, Mylar, Nylon, Polycarbonate, Polyester, Polyethylene, Polypropylene, Polystyrene, Polyurethane, Polyvinyl Chloride, Phenolic, Teflon, Silicone & Fluorosilicone Rubber, Neoprene Rubber, Aluminum, Copper, Brass, Steel.

LuxLink™
www.luxlink.com
166 Haverford Road
Hicksville, NY 11801
USA 516-931-2800

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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

nF – nC = 0.008
Abbe nD : (nD-1) / (nF-nC) = 57

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