



Optical Cladding Materials:

OF-1375A

OF-1375A is a low refractive index coating material which is intended for the cladding of optical fibers. The material is designed to be compatible with Optical Fiber Drawing Towers. It is related to MY-1375 but with a better adhesion to glass.

Properties

n^D liquid	1.368
n^D cured	1.377
RI cured at 900-1000 nm	1.372
Shrinkage upon curing	4%
Density, g/cm³	1.56
Viscosity, cps @ 25°C	3700
90° Peel, g/cm	70
Shore A	About 95
Tensile Strength, MPa	8.3
Elongation, %	54
Elastic modulus, MPa	105
Transparency	clear

The product is supplied pre-filtered to below 1 micron particles.

Storage

1. Avoid unnecessary exposure to ambient light and moisture.
2. The product should be stored at ambient conditions of 10-30°C. Do not refrigerate.
3. Do not store under nitrogen. Oxygen is an essential inhibitor against premature gelation.
4. The coating is supplied in glass bottles. Keep container closed to avoid moisture penetration.

The product is specified to be useful for 6 months.

Application

OF-1375A is a dual cure composition that is based on a fast UV curing followed by a slow moisture curing. The moisture in the surrounding atmosphere is sufficient to start the process. The final stage of the moisture curing is a condensation reaction which releases a small level of methanol (up to 0.3% of the coating weight). The UV curing is done under nitrogen. Typically, a dose of 1-2 J/cm² is necessary.

Safety: Refer to the MSDS

Notes: Peel test conditions

90° Peel test is performed on samples coated on a virgin glass with a thickness of about 270 microns and after a delay of 1 days at ambient conditions followed by one hour @90°C and another 24 hours to re-equilibrate. The average force to peel out a strip of 1 cm width is reported.