



Optical Cladding Materials:

OF-137

OF-137 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 and MY-136 but with a better adhesion to glass.

OF-137 has an intermediate product between OF-136 and OF-1375 with a similar excellent adhesion to glass.

Properties

n^D liquid	1.363
n^D cured	1.372
RI cured at 900-1000 nm	1.368
Density, g/cm³	1.57
Viscosity, cps @ 25°C	2950
90° Peel, g/cm	100
Shore A	About 95
Tensile Strength, MPa	8
Elongation, %	50
Elastic modulus, MPa	100
Methanol release potential (g/Kg)	4.8
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 20-30°C. Do not refrigerate. Upon storage and especially if subjected to low temperature, some ingredients may crystallize out.
3. Long periods of storage combined with excessive heat may cause irreversible gelation..
4. Do not store under nitrogen. Oxygen is an essential inhibitor against premature gelation.
5. The adhesive is supplied in glass bottles. Keep container closed to avoid moisture penetration.

The product is specified to be useful for 6 months.

Application

OF-137 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 is enhanced by heat and coupled with a release of a small level of methanol. The UV curing is done under nitrogen. Typically, a dose of 1000-4000 mJ/cm² is necessary. When properly cured under nitrogen, it should have no oily surface or a tacky surface. Final adhesion will be achieved not earlier than 24 hours after curing and possibly only after rewinding and venting of the fibers. For best adhesion and best performance, it is recommended to allow the fiber to dwell for 30-60 minutes at 80-90°C. This post heat process has to be done a day or more after the coating operation and can be delayed until shortly before the actual use.