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MY-133V-2000

Optical Coating Material and Encapsulant

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MY-133-V2000 is one of a series of low refractive index UV curable coating materials and encapsulants. Its main feature is the extremely low refractive index of 1.33.
MY-133-V2000 should be considered as an encapsulant more than an adhesive. Its adhesion can be improved with the use of primers (See bellow).

Properties

Viscosity	2000 -3000 cps
density	1.71
Refractive index (cured) @ 589nm*	1.333
Refractive index (cured) @ 1μ*	1.329
Curing	300-400 nm
Hardness, Shore A	70
Appearance after curing	Colorless, clear, soft solid
Tensile Strength, MPa	1.2
% Elongation to Break	40
Elastic Modulus, MPa	4.5

* Please contact us for RI data at other wavelengths.
The product is supplied pre-filtered to below 0.5 micron particles.

Storage

1. Avoid unnecessary exposure to ambient light.
2. The product should be stored at ambient conditions of 20-30ºC. 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 partially filled glass bottles. This allows for enough air (oxygen) to be present. Repackaging in plastic (polyethylene or polypropylene) bottles or syringes (silicone free!) is possible because these plastics are permeable to oxygen.

The product is specified to be useful for 12 months but longer use can be experienced with proper handling.

Application

The adhesive is supplied in dark glass bottles. If possible it is recommended to re-pack it in a light-protected syringe. Use a plastic syringe which is permeable and allows oxygen to get in. Do not use syringes with a rubber plunger which also contain a silicone lubricant. Please consult us for a source.

Like most UV cured acrylic resins, the polymerization of MY-133-V2000 leaves an oily surface. To achieve good aesthetic non tacky surface, it is recommended to irradiate under nitrogen. No inerting is necessary when curing between two layers. Curing under a layer of water is also a possibility.
Curing can be achieved by any source of UV at 300-400nm. Typically, a dose of 1000-2000 mJ/cm2 is necessary. Higher doses are advantageous.
The cured product is a soft elastic polymer.

Safety: Although safer than most UV adhesives, this adhesive is a chemical and must be handled by professional workers and after review of the MSDS.