

# MY-1375

## Optical Adhesive and Coating Material

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**MY-1375** is one of a series of low refractive index UV curable adhesives and encapsulants. Its main feature is the low refractive index of 1.375 in the near IR. It is a tough and flexible polymer.

### Properties

n <sup>D</sup> liquid	1.369
n <sup>D</sup> cured (@589 nm)	1.379
Refractive index cured @ 950 nm	1.375
Density, g/cm <sup>3</sup>	1.55
Viscosity, cps	4200
Peel force, glass, g/cm	26
Hardness, Shore D	52
Tensile strength, MPa	9.5
Elongation at break, %	52
Young modulus, MPa	108

The product is supplied pre-filtered to below 0.5 micron particles. It is a pale yellowish clear fluid. It forms a tough flexible polymer upon irradiation.

### Storage

1. Avoid unnecessary exposure to ambient light.
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. If that happens, the product has to be reheated to 60-70°C for half an hour and then shaken well for a few minutes. If necessary, repeat this procedure until it clarifies.
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 is possible because these plastics are permeable to oxygen.

The product is specified to be useful for 12 months if stored properly.

### Application

The adhesive is supplied in dark glass bottles in order to enable observation of its clarity and to enable re-clarification by heating as specified above. 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 silicone lubricant. Please consult us for a source.

Like most UV cured acrylic resins, the polymerization of MY-1375 leaves a tacky 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 can be achieved by any source of UV at 300-400nm. Typically, a dose of 1000-2000 mJ/cm<sup>2</sup> is necessary.

**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.



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