



MY-132 and MY-132A

Optical Adhesive and Encapsulant

MY-132 and MY132A are our lowest refractive index UV curable adhesives and encapsulants. Their main feature is the extremely low refractive index of 1.32 at the NIR.

They should be considered as encapsulants more than adhesives. MY-132A is a tacky polymer with a better adhesion than that of MY-132 and MY-133. MY132 is a somewhat harder polymer but less elastic and more fragile of the two. It should be preferred where a non tacky surface is preferred.

Properties

	MY-132	MY-132A
Viscosity	300-400 cps	2600 cps
density	1.73	1.73
Refractive index (non-cured) @ 589nm*	1.319	1.324
Refractive index (cured) @ 589nm*	1.324	1.326
Refractive index (cured) @ 950 nm*	1.320	1.322
Curing	Min. 1-2 J/cm ² , 300-400 nm	Min. 1-2 J/cm ² , 300-400 nm
Shrinkage upon curing (volumetric) %	2%	1%
Hardness, Shore A	62	30
Appearance after curing	Colorless, clear, soft solid	Colorless, clear, soft solid. tacky
Elastic Modulus, MPa	2.5	0.4
Tensile Strength, MPa	<0.2	0.3
Elongation to Break, %	<10	80
Adhesion to glass, 90° Peel, g/cm	3	7

* 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 20-30°C. Do not refrigerate. Upon storage and especially if subjected to low temperature, some ingredients may crystallize out. It may appear as crystals or haze. 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.

Application

The adhesive is supplied in dark glass bottles in order to enable observation of possible gelation. It can be transferred to 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-132 and MY-132A leaves an oily surface. To achieve good aesthetic surface, it is necessary 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. The cured product is a soft tacky 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.