

## Preliminary DATA SHEET

### SIL-147-XP1 : Optical Adhesive and Coating / Re-Coating Material

**SIL-147-XP1** is a PFAS-Free low refractive index UV curable adhesive/coating designed for various applications, such as recoating and bonding. It has good adhesion to glass, metals and some plastics. A typical application is recoating in cascaded Cladding Light Strippers. It is distinguished by its low modulus which enables improved endurance under thermal cycling and thermal shock.

#### Properties

	Liquid state
RI liquid at 589 nm	1.458
Density, g/cm <sup>3</sup>	1.03
Viscosity, cps @ 25°C	2200
	Cured state
RI cured at 589 nm	1.470
RI cured at 950 nm	1.462
Adhesion to glass, 90° Peel, g/cm	370
Elastic modulus, MPa	43
Tensile Strength, MPa	6.0
Elongation at Break, %	149

The product is supplied filtered to below 1 micron particles.

#### Storage

1. Avoid unnecessary exposure to ambient light and moisture.
2. Long term storage should be at ambient conditions of 10-30°C.
3. The coating is supplied in glass bottles.
4. The shelf life is 12 months.

#### Application

Curing can be achieved by any source of UV at 300-400nm. Typically, a dose of 2000-4000 mJ/cm<sup>2</sup> is necessary. To prevent tackiness on exposed surfaces, it is recommended to cure in an inert atmosphere (*e.g.* under nitrogen). There is no need for inert atmosphere when curing between two layers or in a mold (more on inert curing in the Technical Support page on our web site). Keep the bottle closed in all times when not in use. The material is sensitive to light.

**Safety:** Refer to the SDS

Note: The above information is believed to be reliable, but it is not to be taken as a representation, warrantee or guarantee. Customers should perform their own QC, QA and evaluation tests.

Updated: January 07, 2025