

Norland Blocking Adhesive 107

NBA 107 is a single component, UV curing adhesive used for temporary bonding of lenses to metal polishing mounts or where bonded components need to be easily separated in the future. The adhesive cures in minutes at room temperature by exposure to longwave UV light and eliminates the heat induced strain typical of the old fashioned hot pitch blocking methods. NBA 107 is specifically formulated to provide low shrinkage and low strain to further minimize any potential strain on the lens during the blocking process. Debonding is accomplished by soaking parts in a soapy warm water solution or acetone.

The adhesive cures only by exposure to UV light in the range of 350 to 380 nanometers. The adhesive needs to be exposed to 6 joules/cm squared of UV energy to be fully cured. Recommended light sources include mercury lamps, sun lamps, fluorescent black lights and xenon lamps. Norland Products sells a variety of light sources optimized for curing our adhesive. Cure times are typically in the 1 to 5 minute range depending on intensity of UV light and distance away from surface.

Recommended Light Sources		
HAND HELD	MANUFACTURER	APPROX. CURE TIME
Opticure LED 200	Norland Products Cranbury, NJ	5-10 seconds at 1/2 inch
Opticure 4 Light Gun	Norland Products Cranbury, NJ	120 seconds at 1/2 inch
DESK TOP	MANUFACTURER	APPROX. CURE TIME
Bench Mount Lamp	Spectronics Westbury, NY	50 minutes at 6 inches

Lenses typically separate after soaking in acetone for 10 to 60 minutes. Debonding time is a function of surface area. Plano surfaces will require more time than surfaces with only slight edge contact, therefore annular ring designs of the mounting block are most efficient. Relief grooves or slots in the metal block may also be used for promoting the deblocking process by allowing the solution to come in contact with more of the adhesive.

Lenses may also be debonded just by heating between 80 and 100° C. After separation, the components and tools are cleaned in the detergent/water solution.

Shelf life of the liquid is at least 6 months at room temperature if stored in the original container away from UV light. Prolonged skin contact should be avoided and affected areas should be washed with soap and water. Avoid prolonged vapor inhalation and use in a well ventilated area.

Typical Properties of NBA 107

Solids :	100%
Viscosity at 25° C:	350cps
Refractive Index of Cured Polymer:	1.51
Elongation at Failure :	5%
Modulus (psi) :	800
Tensile Strength (psi) :	78
Hardness - Shore D:	15