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# Norland Optical Adhesive 1622H

Norland Optical Adhesive 1622H is clear liquid adhesive that will cure when exposed long wavelength ultraviolet light. NOA 1622H is recommended for bonding for glass to glass. Adhesion is also good to cellulose acetate butyrate. NOA 1622H is cured by ultraviolet light between 315 to 395 nm. 365 nm is peak absorption. Full cure requires 6 Joules/cm $^2$ . The adhesive exhibits oxygen inhibition when used as a coating. To overcome this the adhesive must be cured under an inert atmosphere, such as nitrogen. This adhesive when fully cured is soft and flexible.

In addition to the UV cure, NOA 1622H contains a latent heat catalyst that can quickly cure areas that do not see the ultraviolet light. The catalyst allows the adhesive to cure in 10 minutes at 125°C in a convection oven, or 3 hours at 80° C. Faster cure times are possible with infrared ovens. Areas in contact with air will cure tacky unless exposed to UV light or given the 125° C cure. Temperatures less than 80°C will not activate the adhesive. The advantage of the heat cure is to bring partially cured adhesive to full cure to get the maximum physical properties of the adhesive. The heat cure is not required if all the adhesive receives proper exposure to UV light.

## Typical Properties of NOA 1622H

| | |
|---|---|
| Refractive Index | 1.622 |
| Temperature Range | -125° C to 125° C |
| Viscosity @ 25C | 220 cps |
| Shore D | 10 |

Keep NOA 1622H refrigerated in a dark place in the original container, refer to the package label for the actual expiration date.. Allow the adhesive to come to room temperature before using.

Care should be taken in handling the this material. The material Safety Data Sheet should be read for this product. Prolonged contact with skin should be avoided and affected areas should be washed thoroughly with copious amounts of soap and water. If adhesive gets into eyes, flush with water for 15 minutes and seek medical attention.

## Spectral Transmission of NOA 1622H

**(thru 1 mil film thickness)**

| | |
|---|---|
| **2000nm** | **99.0%** |
| **1500nm** | **99.0%** |
| **1000nm** | **97.5%** |
| **750nm** | **97.4%** |
| **650nm** | **97.2%** |
| **550nm** | **96.8%** |
| **500nm** | **96.5%** |
| **450nm** | **96.1%** |
| **350nm** | **90.0%** |