



## QH-40 and QH-40A

### Low Refractive Index Laminating Adhesive

**QH-40** is a low refractive index UV curable pressure sensitive adhesive which is designed for the lamination of optical elements. Its main feature is the extremely low refractive index of 1.325.

**QH-40A** is a low viscosity version for QH-40.

**QH-40** is the preferred product with the better adhesion and better general mechanical properties of the two. QH40A due to its lower viscosity is easier to apply on large surfaces. Its main purpose is to enable easier process ability and for creating initial prototypes.

### Properties

	<b>QH-40</b>	<b>QH-40A</b>
Viscosity	14500 cps	5300 cps
density	1.73	1.74
RI (non-cured) @ 589nm*	1.326	1.324
Refractive index (cured) @ 589 nm*	1.327	1.326
Refractive index (cured) @ 950 nm*	1.322	1.321
Curing	300-400 nm	300-400 nm
Shrinkage %	0.8	0.9
Adhesion to glass, 90° Peel, g/cm	20	10
Appearance	Pale yellowish clear fluid.	Pale yellowish clear fluid.
Appearance after curing	clear, soft and tacky solid	very soft and tacky solid

### Storage

1. Avoid unnecessary exposure to ambient light.
2. The product should be stored at ambient conditions of 15-30°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.
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.

The product is specified to be useful for 12 months.

### Application

The adhesive is supplied in dark glass bottles.

The material was designed for curing between two layers, one of which being transparent. Under such conditions the material does not suffer of oxygen inhibition problems.

Curing can be achieved by any source of UV at 300-400nm. Typically, a dose of 1000-4000 mJ/cm<sup>2</sup> 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.