

### Product Description

MXCUR 349 is a medium viscosity, fast curing, single component modified methacrylate ester adhesive. MXCUR 349 is specifically formulated for glass to glass bonding. MXCUR 349 cures rapidly when exposed to ultra violet radiation specifically in the Ultraviolet (UV) light region.

MXCUR<sup>®</sup> 349 offers the following characteristics:

<b>Technology</b>	Acrylic
<b>Appearance</b> (uncured)	Transparent colorless to pale yellow liquid
<b>Chemical Form</b>	Modified methacrylate ester
<b>Cure</b>	Ultraviolet (UV) light
<b>Secondary cure</b>	None
<b>Fluorescence</b>	No
<b>Components</b>	Single – requires no mixing
<b>Viscosity</b>	Medium
<b>Application</b>	Bonding

### Properties of Uncured Material

	Typical Value
<b>Specific Gravity @ 25°C</b>	1.02
<b>Viscosity @ 20°C</b>	500 – 1050 mPas
<b>Flash Point</b>	See MSDS

### Fixture Time

UV fixture time is defined as the light exposure time required to develop a shear strength of 0.1 N/mm<sup>2</sup>

UV Fixture Time, Glass, seconds:

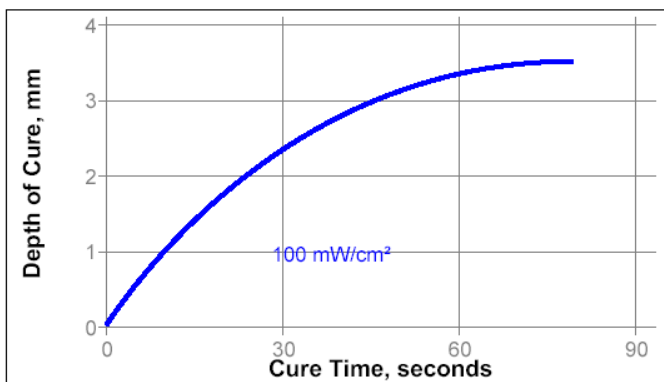
Medium pressure mercury arc:

10 mW/cm<sup>2</sup>, measured @ 365 nm 3 to 8

100 mW/cm<sup>2</sup>, measured @ 365 nm 1 to 5

### Depth of cure

The graph below shows the increase in depth of cure with time at 100mW/cm<sup>2</sup> measured from the thickness of the cured pellet formed in a 15mm diameter PTFE die.



### Properties of Cured Material

#### Physical properties

Full strength achieved after correct UV exposure.

Coefficient of thermal expansion,

ASTMD696, 1/°K: 100  
x10<sup>-6</sup>

Coefficient of thermal conductivity

ASTMC177, W.mK 0.1

#### Electrical properties

Volume Resistivity, IEC 60093, . cm 5×10<sup>15</sup>

Dielectric Breakdown Strength, IEC 60243-1, kV/mm 90

Dielectric Constant / Dissipation Factor, IEC 60250:

1-kHz 3.55 / 0.025

#### Performance of Cured Material

Cured @ 100 mW/cm<sup>2</sup>, measured @ 365 nm for 40 seconds

Tensile Strength, ISO 6922:

Steel pin (grit blasted) to Glass N/mm<sup>2</sup> 11  
(psi) (1,600)

Cured @ 100 mW/cm<sup>2</sup>, measured @ 365 nm for 10 seconds plus 24 hours post cure @ 22 °C

Torsional Shear Strength, ASTM D 3658:

Aluminum hex button to Glass N·m (lbf·in.) 70  
(lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.) (lbf·in.)

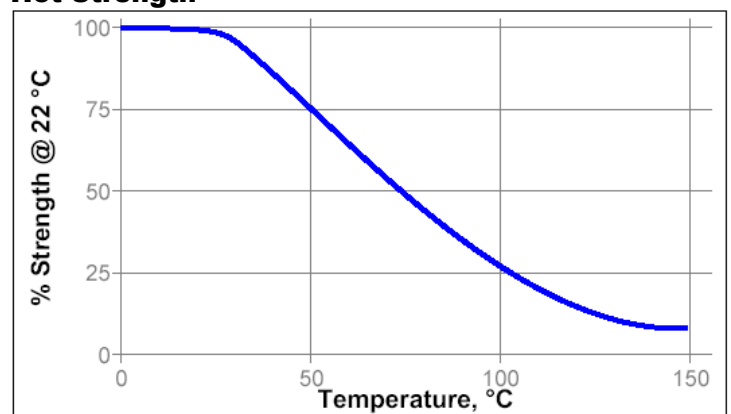
#### Environmental Resistance

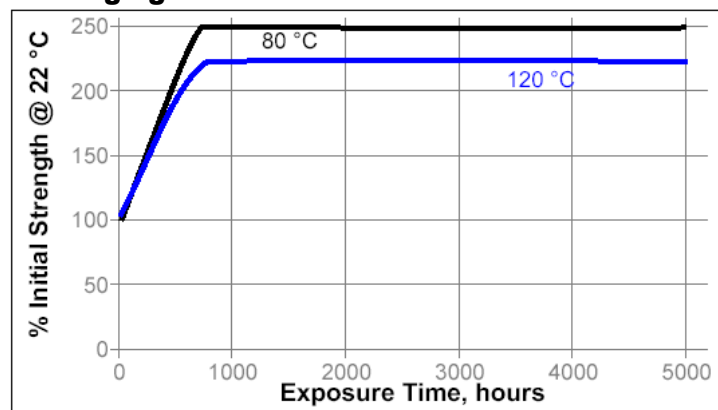
Cured @ 100 mW/cm<sup>2</sup>, measured @ 365 nm for 40 seconds plus 1 week @ 22 °C

Tensile Strength, ISO 6922:

Steel pin (grit blasted) to Glass

#### Hot Strength



**Heat aging****Chemical/Solvent Resistance**

Solvent Temperature % Initial strength retained at

	100hrs	500hrs	1000hrs	
90% R.H.:	40°C	100	100	70
Petrol	22°C	100	100	100
Freon TA	22°C	100	100	100
Industrial Methylated Spirit	22°C	100	100	100

**General information**

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be use with chlorine or other strong oxidising materials.

**For information on the safe handling of this product, consult the Material Safety Data Sheet, (MSDS).**

Where washing systems are used to clean the surfaces before bonding, it is important to check the compatibility of the washing solution with the adhesive. In some cases these solutions can affect the cure and performance of the adhesive.

**Precaution**

1. Use with proper ventilation. Avoid contact with skin and eyes.
2. If contact with skin occurs, rinse with warm water and soap.
3. If adhesive gets into eye, keep eye open and rinse thoroughly. Seek medical attention immediately.
4. Keep well out of reach of children.

**Storage**

Keep adhesive in a cool, dry place optimal storage 8°C-28°C. is recommended unless otherwise labelled. To prevent contamination of unused material, do not return any product to its original container. For specific shelf life information, contact Cartell UK Ltd. Avoid direct sunlight.

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