

**UV and Visible Light Cure Acrylate Adhesive  
For Medical Applications  
USP Class VI Approved**

**mCAST 7104** is a very low viscosity, 100% solids, UV/Visible light curable adhesive that forms resilient, high strength bonds to all substrates such as glass, metals, and plastics. It cures rapidly even under low intensity UV lamps (25-45mW/cm<sup>2</sup>) to a tack free surface.

### Properties Uncured

Color:	Slightly Yellow as liquid	Flash Point:	>200°F
Viscosity:	50 cps	Shelf Life:	1 year at 20-25°C
Specific Gravity:	1.05	Liquid Refractive Index:	1.481

### Properties Cured

Hardness:	80 Rex D	Young's Modulus:	20,000 psi
Cured Color:	Clear in thin sections	Tensile Strength:	2000 psi
Tg:	35°C	Elongation:	280%
Moisture Absorption: (24 hr water soak)	Less than 5%	Volumetric Shrinkage:	Less than 10%
Lap Shear Strength: (glass to glass)	2200 psi	Lap Shear Strength: (pc to pc)	4700 psi

### Cure Profile

mCAST 7104 can be cured with light wavelengths from 320-500 nm.

- ◆ Typical cure times are 2-10 seconds depending upon the intensity of the light, the depth of the adhesive and other environmental factors.
- ◆ This material is not oxygen inhibited so a nitrogen blanket while curing is not necessary.
- ◆ Always wear proper eye protection when working with UV light.
- ◆ Consult your EMI-UV representative for more detailed cure information based upon your specific application and equipment.

### Storage and Handling

mCAST 7104 is shipped and stored at 20-25°C.

- ◆ Shelf Life at 20-25°C is 1 year when stored in the original unopened container.
- ◆ Do not expose to ambient lighting or storage temperatures above 32°C.
- ◆ Keep covered from all ambient light until cured. Exposure to office lighting or general manufacturing floor lighting will cure this material. Filtered plexiglass shielding is recommended for all adhesive work areas.
- ◆ Always wear appropriate gloves and eye protection when working with acrylate adhesives.

## **Shipping and Unpacking Procedure**

This material is packed and shipped at ambient temperatures. It is a stable material and can be stored on the shelf, shielded from light for 1 year. The expiration date is on the syringe label.

- ◆ It is critical that the shipping container is not opened in transit and is expedited to its final destination.
- ◆ DO NOT ALLOW THE SHIPMENT TO BE LEFT ON LOADING DOCKS, IN CUSTOMS WAREHOUSES, OR ON FREIGHT TRUCKS FOR EXTENDED TIME PERIODS.
- ◆ Do not heat or expose this material to temperatures over 32°C, decreased shelf life or rapid polymerization may occur.
- ◆ A small amount of air in the tip area is normal. Carefully remove the tip cap and manually extrude a small amount of material. This will displace any air that may be in the tip area.
- ◆ A small amount of air may accumulate at the rear of the syringe near the piston. This is also normal and this air can easily be removed by manually placing a light amount of pressure on the piston near the location of the visible air with the tip cap in place. This will force the air to by-pass the piston and exit the rear of the syringe. Mount the syringe onto the dispense equipment and purge material through the system until an unbroken flow of material is extruded.

USP Class VI documentation available upon request.

### **IMPORTANT NOTICE**

Good housekeeping rules are always important. Provide ample ventilation in all areas of handling, and use. Avoid prolonged breathing of possible fumes. Minimize skin contact. Use of goggles, rubber gloves, and protective creams is recommended. Always wash exposed areas immediately using warm water and soap followed by rinsing with clear water. If material comes in contact with eyes, flush with clear water for fifteen minutes and consult a physician immediately.

All data in this bulletin are based on our own research and the research of others. They are believed to be accurate. However, no guarantee of accuracy is made. Product description is sold without warranty except conformity to specification and on condition that the purchasers shall determine suitability for their particular purpose.