

# PERMABOND<sup>®</sup> UV670

*UV Curable Adhesive*

**Technical Data Sheet**

Ref. #: 091008PBUV670

## FEATURES & BENEFITS

- ◆ Cure on demand
- ◆ Very flexible and good impact resistance
- ◆ Fast curing with low power lamps
- ◆ 100% solids, no solvents
- ◆ Excellent metal and glass adhesion

## DESCRIPTION

**Permabond UV670** is a single part, fast curing, UV curable adhesive. The cured adhesive is tough, flexible and has excellent impact resistance. **Permabond UV670** is well suited for bonding glass to metals and metalized plastics

## TYPICAL PROPERTIES OF THE UNCURED ADHESIVE

Chemical composition	Methacrylate Ester
Color	Colorless
Viscosity @ 25°C, cP	2,500
Specific gravity at 25°C	1.1
Shelf life, months	12
Storage Temperature, °C (°F)	5 to 25 (41 to 76)

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## TYPICAL CURING PROPERTIES

The cure time depends on the power of the UV lamp, its spectral output, the distance between the lamp and the components, and the transmission characteristics of the substrates. The cure time quoted here was determined using a low power, hand held lamp. Most industrial UV lamps would give a faster cure rate.

Cure wavelength, nm	365-400
Light intensity, mW/cm <sup>2</sup>	4
Cure time, sec	7
Depth of cure, in	0.02

## TYPICAL PROPERTIES OF THE CURED ADHESIVE

Shear Strength, N/mm <sup>2</sup> (psi) Glass to steel	8-9 (1100-1300)
Tensile Strength, N/mm <sup>2</sup> (psi) ASTM D-2095	12 (1700)
Refractive Index	1.47
Elongation, %	85
Hardness, Shore D	58
Dielectric Strength, KV/mm	12
Dielectric Constant, 1MHz @ 25C	4
Temperature Range*, °C (°F)	-54 to 120 (-65 to 250)

\*Higher temperature may be endured for short periods providing the parts are not unduly stressed.

## ADDITIONAL INFORMATION

This product is not recommended for use in contact with strong oxidizing materials. Information regarding the safe handling of this material may be obtained from the material safety data sheet (MSDS).

## SURFACE PREPARATION

Surfaces should be clean, dry and grease free before applying the adhesive. Particular care should be taken to remove silicone based cleaning agents which may have been used to clean the glass. Metals such as aluminum, copper and its alloys will benefit from light abrasion with emery cloth or similar abrasion material, to remove the oxide layer.

## **ADHESIVE APPLICATION**

Adhesive can either be applied directly from the bottle or dispensed using automated dispensing equipment. It is important to prevent air entrapment within the bond line as this could be detrimental to the finished appearance of the cured adhesive. Parts should be firmly held in place and not disturbed during cure as this could lead to a "crazing" effect. Expose the joint to ultra-violet light for the appropriate time to ensure full cure. The cure time depends on the power of the UV lamp, its spectral output, the distance between the lamp and the components, and the transmission characteristics of the substrates. This product is light sensitive; exposure to light during handling or storage should be kept to a minimum.

## **STORAGE & HANDLING**

**Permabond UV670** should be stored in a cool, dry place in the unopened container at a temperature between 5°C and 25°C (41°F and 77°F). Under these conditions the product has a shelf life of 12 months. Protect the adhesive from light, especially UV light.

**Please refer to the MSDS for more information on the handling of this material.**

**FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN**