

Permabond UV640 is a UV-curing adhesive suitable for use on glass, metal and in particular plastics. It has a longer wavelength UV cure so can be used on UV-stabilised plastics. UV640 cures to give a colourless bond so is ideal for applications where aesthetic appearance is vitally important. It is a higher viscosity version of UV630 for applications where larger gap fill is required.

Physical Properties

Chemical Type	Methacrylate Ester Single Part
Colour (when cured)	Colourless
Viscosity @ 25°C mPa.s	3500
Maximum Gap Fill	0.4 mm
Density	1.1
Cure Wavelength	365 - 420 nm
Cure time (4 mW/cm²)	7 seconds

* Actual cure times will depend 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 handling time quoted here was determined using a low power, hand held lamp. Most industrial UV light sources would give a faster rate of cure.

Performance

Shear Strength	PC/PC	9 MPa
Tensile Strength		11.5 MPa
Refractive Index		1.47
Elongation		110%
Hardness		60 Shore D
Service Temp.*		-55 to +120°C
Dielectric Strength		12 KV/mm
Dielectric Constant	1MHz @25°C	4

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

Surface Preparation

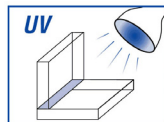
Surfaces should be clean, dry and grease free before applying the adhesive. Particular care should be taken to remove silicone based cleaning agents which may have been used previously to clean glass. Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth, or similar, to remove the oxide layer. Permabond Cleaner A can be used to degrease most surfaces. Where thermoplastic surfaces are involved we recommend tests are done to ensure compatibility.

Adhesive Application

Adhesive can either be applied directly from the bottle or dispensed via automated dispensing equipment for more accurate dosing.

It is important to try to prevent air entrapment within the joint as this could be detrimental to the finished appearance of the adhesive.

Parts should be firmly held 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.



For help selecting a suitable lamp and/or dispensing equipment, please contact the Permabond technical helpline.

Storage and Handling

Storage Temperature	5 to 25°C
Shelf Life Stored in original unopened containers	12 months

Users are reminded that all materials, whether innocuous or not, should be handled in according to the principles of good industrial hygiene. Full information can be obtained from the Material Safety Data Sheet.

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