

Permabond UV7141 is a UV-curable adhesive with a secondary anaerobic cure mechanism. This makes it ideal for bonding materials such as ceramic-coated glass, mirrors etc. where UV-light cannot penetrate to provide full cure in shadow areas. This dual cure mechanism helps speed up production rates. The UV cure tacks the components in place in seconds, reducing the need for jiggling. The bulk of the adhesive then cures more slowly to produce optimum performance.

Physical Properties

Chemical type	Methacrylate ester
Colour	Colourless
Viscosity	1500 mPa.s
Density	1.05
Flash point	>100°C
Maximum gap fill	0.3mm
Cure time (4 mW/cm²)	5-20 seconds
Cure wavelength	365 - 420 nm
Anaerobic cure speed	40-60 minutes
Working strength	3-6 hours

Performance

Tensile strength	ASTM D-2095-69	20 N/mm ²
Refractive index		1.49
Light transmittance		>98%
Coefficient of thermal expansion		85 x 10 ⁻⁶ mm/mm/°C
Dielectric constant	25°C 1000 Hz	4
Dielectric strength		10-12 KV/mm
Service Temperature*		-55 to +120°C

*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.
- For assemblies where neither component is metallic, and where UV-light cannot reach the adhesive, apply Permabond A905 to one component.
- Apply the adhesive to the other surface and assemble. Avoid entrapping air.
- Cure edges of adhesive with UV light. This will secure parts in seconds and save having to clamp components.
- Components can be handled immediately after UV-cure but it is advisable not to subject the joint to heavy loading for several hours whilst the anaerobic cure takes place.

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 accordance with the principles of good industrial hygiene. Full information can be obtained from the Material Safety Data Sheet.

Contact Permabond:

Europe: Tel. +44 (0)1962 711661
UK Helpline: 0800 975 9800
Deutschland: 0800 10 13 177
France: 0805 11 13 88
info.europe@permabond.com

US: Tel. 00 1 732-868-1372
Helpline: 800-640-7599
info.americas@permabond.com
Asia: Tel. 00 886 939 49 3310
info.asia@permabond.com

www.permabond.com

The information given and the recommendations made herein are based on our experience and are believed to be accurate. No guarantee as to, or responsibility for, their accuracy can be given or accepted, however, and no statement herein is to be treated as a representation or warranty. In every case we urge and recommend that purchasers, before using any product, make their own tests to determine, to their own satisfaction, its suitability for their particular purposes under their own operating conditions.