

Features & Benefits

- 💧 Cure on demand
- 💧 High shear strength
- 💧 Fast curing with low-power lamps
- 💧 100% solids, no solvents
- 💧 Excellent adhesion to plastics

Description

PERMABOND UV632 is a UV-curing adhesive developed for use on plastics. It has superb adhesion to acrylic and contains a long-wavelength photo initiator to allow it to cure through UV-stabilised plastics. This adhesive can also be used to bond glass, metals and other materials. UV632 cures to give a colourless bond so is ideal for applications where aesthetic appearance is vitally important.

Physical Properties of Uncured Adhesive

Chemical composition	Urethane methacrylate
Appearance	Clear, colourless
Viscosity @ 25°C	200-300 mPa.s (cP)
Density	1.1

Typical Curing Properties

Fixture time (low power 4mW lamp)*	<60 seconds (polycarbonate) <10 seconds (Plexiglass) <10 seconds (PET)
Maximum gap fill	0.2 mm 0.008 in
Cure wavelength	365 - 420 nm

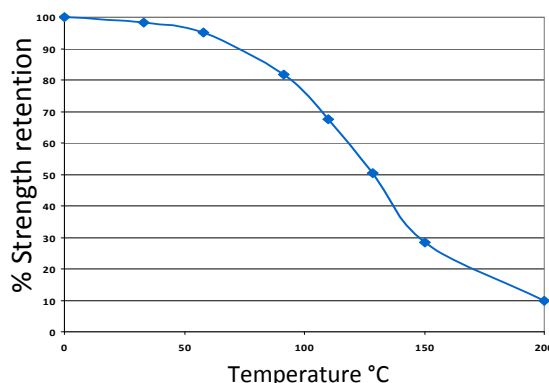
**The cure time depends on the power of the UV lamp, its spectral output, the distance between the lamp and the components, and the transmission characteristics of the substrates. The cure time quoted here was determined using a low power, hand held lamp. Most industrial UV lamps would give faster cure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

Typical Performance of Cured Adhesive

Shear strength	Polycarbonate >5 N/mm ² (>700 psi)* Plexiglass >3 N/mm ² (>400 psi) PET >4 N/mm ² (>600 psi)*
Tensile strength ASTM D-2095	13 N/mm ² (1900 psi)
Refractive index	1.48
Elongation	130%
Shore D hardness	60
Dielectric strength	12 KV/mm
Dielectric constant 1MHz@25°C	4

*Substrate failure was observed

Temperature Resistance



UV632 can withstand higher temperatures for brief periods (such as for paint baking and wave soldering processes) providing the joint is not unduly stressed. The minimum temperature the cured adhesive can be exposed to is -55°C (-67°F) depending on the materials being bonded.

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).

Users are reminded that all materials, whether innocuous or not, should be handled in accordance with the principles of good industrial hygiene.

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.

No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.

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. Isopropanol can be used to degrease most surfaces. Where thermoplastic surfaces are involved we recommend tests are done to ensure compatibility, mold release agents may affect bond strength.

Directions for Use

- 1) Adhesive can either be applied directly from the bottle or dispensed via automated dispensing equipment for more accurate dosing.
- 2) It is important to try to prevent air entrapment within the joint as this could be detrimental to the finished appearance of the adhesive.
- 3) Parts should be firmly held and not disturbed during cure. Expose the joint to ultra-violet light for the appropriate time to ensure full cure.
- 4) For help selecting a suitable lamp and/or dispensing equipment, please contact the Permabond technical helpline.

Storage & Handling

Storage Temperature	5 to 25°C (41 to 77°F)
Shelf Life Stored in original unopened containers	12 months
Protect liquid adhesive from room lighting.	

Other Products Available

Anaerobics

- Toughened
- Gas & water approved
- High temperature resistance
- Flexible

Cyanoacrylates

- Low bloom / low odour
- Flexible
- High temperature resistance

Epoxies

- Fast cure
- Toughened
- Flexible grades

Toughened Acrylics

- Rapid cure
- Low odour
- Pre-mixed
- Gap filling

UV Light Cured

- Glass / plastic bonding
- Optically clear
- Non-yellowing

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. +1 732-868-1372
Helpline: 800-640-7599
info.americas@permabond.com
Asia: Tel. +86 21 5773 4913
info.asia@permabond.com

www.permabond.com

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full-scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. THE PRODUCTS DISCLOSED HEREIN ARE SOLD WITHOUT ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED.

No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.