

# UV-Curable Adhesives

Permabond UV-curable adhesives are single part, cure on demand adhesives suitable for bonding a wide variety of substrates. Upon exposure to UV light, Permabond UV curables will cure to a high strength in a matter of seconds.

## **Permabond UV curable adhesives are suitable for a variety of applications.**

They are excellent for bonding glass to glass or glass to metal and form very high strength bonds for load bearing joints, such as those found in glass furniture and display cases.

Flexible and stress absorbing, Permabond UV curable adhesives are suited to applications where substrates with different thermal expansions need to be bonded.

Permabond UV curable adhesives bond a wide variety of plastics. Some clear plastics contain UV stabilizers that block the transmission of UV light, however, Permabond has formulated plastic bonding adhesives with UV and visible light curing capabilities to allow these plastics to be bonded. Permabond's technical staff can help you identify the UV transmission characteristics of the plastic you are using and assist you with selecting the best product for your application.

## **Permabond UV curable adhesives form strong and durable bonds.**

Permabond UV curable adhesives cure during exposure to ultra violet light. The adhesives contain photo-initiators that react to specific wavelengths of light to cure the adhesive.

UV adhesives do not dissolve, melt or weaken the two components. They form strong chemical bonds between the two substrates and provide a high strength alternative to other joining methods.

Curing lamps are available in a variety of intensities from small inexpensive hobby type lamps to high intensity units for high speed production. Permabond will help you select the equipment best suited to your specific application.

## **Benefits**

- Cure on demand - allows proper alignment of components before bonding.
- Speed - increase production by simply adding more lamps to the line.
- Non-flammable and solvent-free - supports a safe and comfortable work environment.
- Single part product - No mixing required.
- 100% solids = No waste.
- Save energy and space - UV lamps require less electricity and space compared to ovens.
- Appearance - UV adhesives provide a pleasing finished appearance.
- Technical support- application specialists available for assistance with joint design, adhesive selection and production process.



**Permabond**<sup>®</sup>  
Engineering Adhesives

## Permabond UV-Curable Adhesives Selector Guide

This table represents a selection of the complete range of Permabond UV-curable adhesives. For more detailed technical information and Technical Data Sheets please visit [www.permabond.com](http://www.permabond.com). To discuss your specific application requirements, please call the Permabond Helpline, our technical advisors will recommend the best adhesive from our existing product line or assist in developing a custom formulation.

Grade	Primary Application	Appearance	Viscosity mPa.s = cPs	Fixture time (secs) Very Low Intensity 4mW/cm <sup>2</sup>	Tensile strength (N/mm <sup>2</sup> ) psi	Shear strength (N/mm <sup>2</sup> ) psi	Shore D Hardness	Refractive Index	Elongation	Service Temp. (°C) °F
UV610	High strength bonding for glass to metal.	Translucent	800-1000	11	(17) 2500	Steel to glass (13-16) 1900-2300	70	1.47	95%	(-55 to +120) -65 to +250
UV620	General purpose, optically clear.	Clear, colourless	2000-3000	5	(16) 2300	Steel to glass (9-10) 1300-1500	62	1.49	75%	(-55 to +120) -65 to +250
UV625	Non-drip for larger gaps and vertical applications.	Clear, colourless	Gel	5	(16.5) 2400	Steel to glass (10-11) 1400-1600	65	1.47	40%	(-55 to +120) -65 to +250
UV630	Low viscosity, plastic bonding.	Clear, colourless	200-300	6	(14) 2000	PC to PC* (>9) >1300	60	1.47	110%	(-55 to +120) -65 to +250
UV632	Low viscosity, plastic bonding, excellent adhesion to acrylic.	Clear, colourless	200-300	10	(13) 1900	PC to PC* (>9) 1300	60	1.47	170%	(-55 to +120) -65 to +250
UV640	Medium viscosity, plastic bonding.	Clear, colourless	3000-4000	7	(13) 1900	PC to PC* (>9) >1300	60	1.47	110%	(-55 to +120) -65 to +250
UV648	Medium viscosity, plastic bonding. excellent adhesion to acrylic.	Clear, colourless	Gel	10	(11) 1600	PC to PC* (>9) >1300	60	1.47	150%	(-55 to +120) -65 to +250
UV670	Flexible for metal and metallized plastics.	Clear, colourless	2000-3000	7	(12) 1700	Steel to glass (8-9) 1100-1300	58	1.47	85%	(-55 to +120) -65 to +250
UV7141	UV and anaerobic curing. For bonding ceramic coated glass, mirrors, glass and metal	Clear/colourless liquid, slightly yellow cured	1000-2000	15	(20) 3000	Steel to glass (14-17) 2000-2500	-	1.49	-	(-55 to +150) -65 to +300

The variables affecting cure speed include the wavelength and intensity of the light source, distance from the light to the bond site, UV transmission of the components, and the thickness of the adhesive. Permabond's technical staff will assist you with the right combination for your application.

PC = Polycarbonate

\*Denotes substrate failure

Products are available worldwide.

### Permabond Worldwide

Wherever your manufacturing or R&D site may be located, Permabond representatives can be called upon to assist you. We have an extensive network of professional distributors worldwide.



- Americas +1 732 868 1372  
• US 800-640-7599
  - Asia + 86 21 5773 4913
  - Europe +44 (0) 1962 711661  
• UK 0800 975 9800
  - Deutschland 0800 111 388  
• France 0805 111 388
- [info.americas@permabond.com](mailto:info.americas@permabond.com)  
[info.europe@permabond.com](mailto:info.europe@permabond.com)  
[info.asia@permabond.com](mailto:info.asia@permabond.com)

[www.permabond.com](http://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.