

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, but they can still be bonded with visible light curing adhesives. Permabond's technical staff can help you identify the UV characteristics of the plastic you are using.

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, causing the curing process to begin.

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.

Lamps are available in a variety of intensities from small inexpensive hobby type lamps to larger 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.
- Cure speed - increase production by simply adding more lamps to the line.
- Non-flammable and solvent-free - provides a safe and comfortable work environment.
- Single part product - No mixing required.
- 100% solids equal no waste and no VOCs
- Save energy and space - UV lamps require less electricity and space compared to ovens.
- Appearance - UV adhesives provide quality aesthetics.
- Technical support- application specialists available for assistance with joint design, adhesive selection and production process.



Permabond[®]
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. 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	Colour	Viscosity (mPa.s)	Fixture time (secs) Low powered 4mW/cm lamp	Tensile strength (MPa)	Lap shear strength (MPa)	Hardness (Shore D)	Refractive Index	Elongation (%)	Service Temperature (°C)
UV610	High strength bonding for glass to metal.	Translucent	800-1000	11	17	Steel to glass 13-16	70	1.47	95	-55 to +120
UV620	General purpose, optically clear, excellent resistance to yellowing.	Clear, colourless	2000-3000	5	16	Steel to glass 9-10	62	1.49	75	-55 to +120
UV625	Non-drip for larger gaps and vertical applications.	Clear, colourless	Gel	5	16.5	Steel to glass 10-11	65	1.47	40	-55 to +120
UV630	Low viscosity, plastic bonding.	Clear, colourless	200-300	6	14	PC to PC >9*	60	1.47	110	-55 to +120
UV640	Medium viscosity, plastic bonding.	Clear, colourless	3000-4000	7	13	PC to PC >9*	60	1.47	110	-55 to +120
UV645	Plastic bonding. good adhesion to acrylic.	Clear, colourless	10,000-12,000	7	11	PC to PC >9*	65	1.47	110	-55 to +120
UV649	Plastic bonding gel	Clear, colourless	Gel	7	15	PC to PC >9*	65	1.47	110	-55 to +120
UV670	Flexible for metal and metallized plastics.	Clear, colourless	2000-3000	7	12	Steel to glass 8-9	58	1.47	85	-55 to +120
UV7141	UV and anaerobic curing. For bonding ceramic coated glass, mirrors, glass and metal	Clear/ colourless liquid, slightly yellow when cured	1000-2000	15	20	Steel to glass 14-17	-	1.49	-	-55 to +150

The variables affecting cure speed include the wavelength and intensity of the light source, distance from the light to the adhesive film, 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

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 trained distributors worldwide.



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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.