PERMABOND UV6357

UV-Curable Adhesive

Provisional Technical Datasheet

Features & Benefits

- Ideal for use on glass and metal, as well as epoxy-coated metals
- Flexible and tough
- Suitable for temperatures below 0°C
- Excellent environmental resistance, ideal for outdoor applications
- Excels at mixed bonding tasks such as glass to plastics

Description

PERMABOND® UV6357 is a fast curing, UV-curable adhesive, developed for bonding glass to glass or glass to metal. It provides excellent performance on several thermoplastics, including polycarbonate, ABS, rigid PVC and Nylon.

Physical Properties of Uncured Adhesive

Chemical composition	Methacrylate ester
Appearance	Transparent
Viscosity @ 25°C	20 rpm: 35,000 mPa.s ***(cP)***
Specific Gravity	1.1

Typical Curing Properties

Maximum gap fill	0.2 mm (***0.008 in)***
Typical fixture time (glass)*	UV LED 365 nm 150 mW/cm^2: 4 secs
Cure wavelength	365 - 400 nm** Ideal with LED lamps at 365nm

**The cure time depends on the power of the UV lamp, its spectral output, the distance between the lamp and the transmission characteristics of the substrates.*

***LED UV lamps have a narrow range of spectral output. It is important to check suitability with Permabond in order to match the LED lamp's peak wavelength with that of the adhesive's photoinitiator to ensure optimal adhesive cure.*

Typical Performance of Cured Adhesive

Shear strength* (ISO4587)	Polycarbonate (PC)	6-7 N/mm^2 ***(870-1015 psi)***
	Acrylic	3-4 N/mm^2 ***(435-580 psi)***
	PVC to PVC	6-7 N/mm^2 ***(870-1015 psi)***
	PA 6,6 to PC	4-6 N/mm^2 ***(580-870 psi)***
	ABS to PC	4-6 N/mm^2 ***(580-870 psi)***
	Mild steel to PC	7-8 N/mm^2 ***(1015-1160 psi)***
	Aluminium to PC	6-7 N/mm^2 ***(870-1015 psi)***
	Stainless to PC	8-10 N/mm^2 ***(870-1015 psi)***
Block shear* (ASTM D4501)	Aluminium to glass: 10 N/mm^2 ***(1450 psi)***	
Tensile strength (ASTM D-2095- 69)	Steel to glass: 10 N/mm^2 ***(1450 psi)***	
Tensile strength (ASTM D638)	13 N/mm^2	
Elongation at break (ISO 527)	440%	
Hardness (ISO 868)	40 Shore D	
Elastic modulus (ISO 527)	50 N/mm^2	
Water absorption (ISO 62)	24h at 23°C: 4.9%	

**strength results will vary depending on the level of surface preparation and gap.*

Additional Information

This product is not recommended for use in contact with strongly oxidizing materials.

Information regarding the safe handling of this material may be obtained from the Safety Data Sheet.

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

This technical datasheet (TDS) offers guideline information and does not constitute a specification.

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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 an 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 – mould 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. Minimise exposure of product to ambient light.
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. 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.
4) For help selecting a suitable lamp and/or dispensing equipment, please contact the Permabond technical helpline.

Video Link

UV adhesive directions for use:
https://youtu.be/Y9q0FGFhdvc

Other Products Available

Anaerobics

- Thread-lockers
- Thread-sealants
- Gasket-makers
- Sealants / retainers

Cyanoacrylates

- Instant adhesives
- For rapid bonding of metals, plastics, rubbers and many other materials

Epoxies

- Two-part room temperature cure adhesives
- Single-part heat-cure adhesives
- Modified Technology (MT) flexible grades available

MS-Polymers

- Single-part moisture-cure, flexible sealants

Polyurethanes

- Two-part room temperature cure adhesives

Toughened Acrylics

- Rapid-cure, high-strength structural adhesives

UV Light Cured Adhesives

- Glass / plastic / metal bonding
- Optically clear grades available
- Non-yellowing grades available

Storage & Handling

Storage Temperature	5 to 25°C *(41 to 77°F)*
Protect liquid adhesive from room lighting.	

www.permabond.com

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