PERMABOND® UV6260

UV-Curable Adhesive

Provisional Technical Datasheet

Features & Benefits

- Ideal for use on coloured glass
- Excellent strength on polycarbonate, PVC, and other rigid plastics
- Tack-free surface cure
- Very quick cure at wavelengths from 365 to 420 nm, good on stabilized plastics
- Resists yellowing

Description

PERMABOND® UV6260 is a thixotropic, extremely fast, UV-curable acrylic adhesive developed for bonding metals, glass and plastics, where the UV light is filtered by the substrate. It cures tack-free and provides excellent performance on several thermoplastics including polycarbonate, PMMA PETG, PET, ABS, and rigid PVC.

Physical Properties of Uncured Adhesive

Chemical composition	Urethane acrylate
Appearance	Pale yellow (colourless when cured)
Viscosity @ 25°C	2 rpm: 45,000 mPa.s *(cP)* 20 rpm: 17,000 mPa.s *(cP)*
Specific gravity	1.0

Typical Curing Properties

Typical fixture time (glass)*	UV LED 395nm 150 mW/cm²: <1 sec UV LED 395nm 0.1 mW/cm²: 6 secs
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.*

***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

Overlap shear strength (ISO 4587)*	Polycarbonate (PC): >11 N/mm² ** SF *(>1595 psi)* Acrylic: >6 N/mm² ** SF *(>870 psi)* PETG: >9 N/mm² ** SF *(>1305 psi)* Polysulfone: 4-8 N/mm² *(580-1160 psi)* PVC to PC: >10 N/mm² ** SF *(>1450 psi)* Polystyrene to PC: 3-6 N/mm² *(435-870 psi)* PA 6,6 to PC: 2-5 N/mm² *(290-725 psi)* ABS to PC: 8-12 N/mm² *(1160-1740 psi)* Mild steel to PC: 6-10 N/mm² *(870-1450 psi)*
Block shear (ASTM D4501)*	Aluminium to glass: 10-14 N/mm² *(1450-2030 psi)* Mild steel to glass: 10-14 N/mm² *(1450-2030 psi)* PMMA to glass: 6-10 N/mm² *(870-1450 psi)* PC to glass: 7-11 N/mm² *(1015-1595 psi)* ABS to glass: 8-12 N/mm² *(1160-1740 psi)*
Tensile strength (ISO 527)	10 N/mm² *(1450 psi)*
Elongation at break (ISO 527)	205%
Hardness (ISO 868)	60 Shore D
Tg (DMA, Tan delta)	62°C
Water absorption (ISO62)	24h at 23°C: 2%

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

*** Substrate failure was observed*

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 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.

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.

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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 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. 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, rubber 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-curing, flexible sealants

Polyurethanes

- Two-part room temperature curing adhesives

Toughened Acrylics

- Rapid curing, high strength structural adhesives

UV Light Cured Adhesives

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

Storage & Handling

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

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