



UV-Curable Adhesive Technical Datasheet

June 2014

UV Chip Repair Compound for Natural and Engineered Stone

Chem-set™ UV Stone Repair adhesive is used when a fast permanent repair is needed to fix: Scratches, Chips, Gouges, Holes, Cracks, and Nicks on Natural and Engineered Stone. This revolutionary adhesive incorporates a proprietary "Curing Sheet" that ensures a tack free permanent repair. The adhesive is non-yellowing, UV stable, and will not scratch or fracture. Conveniently packaged, Do-It- Yourselfers, Fabricators, Installers, and Maintenance Crews can complete many repairs with one package of adhesive.

Features & Benefits

- Fast Repairs of Natural & Engineered Stone
- Fixes Scratches, Nicks, Gouges and Chips
- Tough Permanent Repair, Does Not Fracture or Chip

Physical Properties of Uncured Adhesive

Chemical composition	Acrylate
Appearance	Colourless
Viscosity @ 25°C	1000-1500 mPa.s (cP)
Density	1.1

Typical Curing Properties

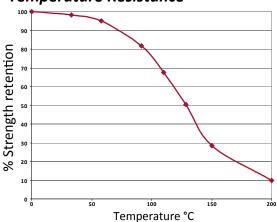
Fixture time (low power 3.5 mW/cm² lamp)*	3.5 seconds
Tack free time (33mW/cm²	3.5 seconds
Cure wavelength	365 - 420 nm

^{*}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

Tensile strength ASTM D-2095	10-11 N/mm² (1450-1500 psi)
Light transmittance	98%
Refractive index	1.484
Elongation	50%
Shore D hardness	60
Dielectric strength	12 KV/mm
Dielectric constant 1MHz@25°C	4

Temperature Resistance



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). The (MSDS) and (TDS) can be obtained from our website at chemical-concepts.com. Users are reminded that all materials, whether innocuous or not, should be handling in accordance with the principles of good industrial hygiene.

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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

- Adhesive can either be applied directly from the bottle or dispensed via automated dispensing equipment for more accurate dosing.
- 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 cur. Expose the joint to ultra-violet light for the appropriate time to ensure full
- 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

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

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