



The Glue People

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Tradeweld CRYSTAL

Transparent structural adhesive

General Description

Tradeweld Crystal is a two component transparent structural methacrylate adhesive, designed for the bonding of high strength plastic and composite applications. The adhesive is an advanced liquid composite which combines shock resistance and toughness from a unique blend of hybrid rubbers with a high tensile shear strength from an innovative liquid plastic resin. Once cured this fusion of chemistries achieves an ultra high strength UV stable bond with excellent chemical and environmental resistance.

Tradeweld Crystal is very versatile and can bond a wide range of substrates to plastics without the need for surface primers or conditioners. Typical applications include:

- Repairing de-bonded caravan windows.
- Bonding polycarbonate letters in the sign industry.
- Bonding Perspex in POS manufacture.
- Repairing polycarbonate headlights.
- Bonding outdoor lighting lenses and fixtures.
- Assembling electric meter housing and covers.
- anything that would benefit from a transparent bond line.

Application

Always consult the material safety datasheet (MSDS) prior to first time use. Carry out surface preparation where required. For best results use on clean, dry substrates between +10°C to +30°C.

Insert the cartridge into the slot on the applicator gun. Once the cartridge is secure, remove the cartridge cap and level the pistons by dispensing a small amount of material, before attaching the mixing nozzle. Attach the mixing nozzle and dispense adhesive until a uniform colour is evident.

Apply the mixed adhesive to one joint surface, immediately bring the two surfaces into contact and apply a steady pressure, *clamping if necessary. Remove any excess adhesive prior to curing using a suitable cleaner. Allow the adhesive suitable time to achieve handling strength before moving or unclamping components. Once the product has fully cured, polish any adhesive outside of the bond line with a soft cloth to achieve a deep shine.

*Do not clamp when using with Caravan windows.

When re-bonding delaminated caravan windows, apply the smallest amount of adhesive possible to one side only. Place the upper sheet into place and allow it to float on the adhesive. The adhesive may soften the plastic slightly and allow it to craze if any pressure is exerted onto it. Allow the adhesive to cure fully and also allow the plastic to harden up prior to refitting the window. This may take a few days at room temperature depending on temperature and the amount of adhesive used.

The cartridge can be re-sealed if only partly used by removing the mixing nozzle, cleaning the two cartridge openings and replacing the cartridge cap.

Physical Data

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| Resin | Methyl Methacrylate |
| Colour | Clear |
| Appearance | Transparent Liquid |
| Viscosity | 5000-6000cps (Brookfield T Bar) |
| Density | 1.2 g/cm ³ |
| Cure System | Exothermic |
| Cure Time | 5-7 minutes handling strength 1 hour (80% of full bond strength) 4-6 hours full cure strength |
| Shore D Hardness | 45 to 55 |
| Temperature Resistance | -30°C to +120°C fully cured |
| Elasticity Modulus | 462 N/mm ² |
| Tensile Strength | 7.67 MPa |
| Elongation at break | 25% |
| Shelf life | 6 months |

Surfaces

DO NOT use on PE, PP, PTFE or other stressed acrylics. All surfaces should be lightly abraded with a medium grit emery paper and cleaned with isopropyl alcohol. DO NOT use white spirit, methylated spirit or other cleaners as they may react with the adhesive and cause it to fail over time.

General Information

Packaging – Available in 25ml hand applied syringe, or 50ml gun applied cartridges.

Terminology

Working time/Open time: The time interval between application of adhesive to substrate, and the possible assembly / repositioning of the two mating parts at 20°C.

Storage - Products shall be ideally stored in a cool, dry location in unopened containers at a temperature between 8° to 28°C (46° to 82°F) unless otherwise labeled. Optimal storage is at the lower half of this temperature range. Stored correctly Tradeweld Crystal offers a 12 month shelf life from date of manufacture.

Important Notice - Data contained in this document is for information only and is believed to be reliable. Trade Grade Products Ltd (TGP) cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability of the product for any specific purpose and TGP is pleased to provide a sample upon request.

Before using this product ensure that you have been supplied with and have read carefully the following information.

- The hazard label (complying with latest CDG/CPL regulations) applied to the container.
- Material Safety Data Sheet, Tradeweld Crystal.