

Telephone: (44)01827 255719 Email: distributors@img-limited.co.uk Industrial Maintenance Group Distributors Riverside Industrial Estate Fazeley, Tamworth Staffordshire, B78 3RW

EXTREME BOND

For bonding wood, glass, metal, plastic and composites.



What is a toughened acrylic?

EXTREME BOND is a 2nd generation acrylic adhesive. This has been designed to combine high-shear strength & excellent temperature resistance with additional qualities of a rubber toughened adhesive.

When to use Extreme Bond

When maximum strength is required. With metal fabrications requiring shock resistance or flexibility. When bonding dissimilar materials with different coefficients of expansion and where a short jig time is required.

Key features and benefits of Extreme Bond

- Adhesion to a wide range of substrates.
- Fast cure at room temperature.
- Can be used with or without nozzle.
- High shear and peel strength
- Good impact strength.
- o Good chemical resistance.

Directions for use

1) Surfaces must be clean, dry and grease-free. If using a cleaning solvent, allow 3-4 minutes to fully evaporate before applying adhesive.

N.B. Some metals such as aluminium, copper and its alloys will benefit from light abrasion with emery cloth (or similar) to remove any oxide layer.

2) Apply a thin bead of adhesive pre-mixed through a static mixer nozzle. If no mixing nozzle is being used, make sure one component is extruded on top of the other (not side by side).

3)Alternatively apply a thin layer of resin on one component and hardener on the other.

4) Assemble components and clamp.

5) Maintain pressure until handling strength is achieved. The time required will vary according to the joint design and surfaces being bonded.

6) Allow 24 hours for adhesive to fully cure. Accelerated cure times may be achieved by heating.

Storage & Handling

Storage Temperature 2 to 7°C (35 to 45°F)

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The IM Group utilizes a process of continuous product improvement for all of our products. While the IM Group strictly adhere to our products specifications, we routinely implement product improvements. Therefore, please contact us for our most current product specifications. The IM Group warrants the quality of this product when used according to directions. Apply protective coatings per Company Standards. User shall determine suitability of product for use and assumes all risk. The seller will not accept liability for more than product replacement.



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Additional Technical Information

Shear strength (ISO4587)* Steel: 24-25 N/mm² (3500-3600 psi) Aluminium: 26-28 N/mm² (38004000 psi) Peel strength (ISO 4578) 250-300 N/25mm (56-67 PIW) Hardness (ISO868) 75-80 Shore D Coefficient of thermal expansion (ASTM D-696) 80 x 10-6 1/K Thermal conductivity (ASTM C-177) 0.1 W/(m.K) Dielectric constant (ASTM D-150) 4.6 Dielectric strength (ASTM D-149) 30-50 kVmm Volume resistivity (ASTM D-257) 2 x 1013 Ohm.cm

Physical Properties of Uncured Adhesive

Chemical composition Methyl methacrylate Methyl methacrylate

Colour Pink/Green Mixed colour Light purple Viscosity @ 25°C 3,000-5,000 mPa.s (cP) 3.000-5.000 mPa.s (cP) Specific gravity 1.1 1.0

Chemical Resistance

Excellent Resistance to: - Hydrocarbons - Acids and Bases (3-10 ph)

- Salt Solutions

Typical Properties of Cured Material

| 50% Ultimate Strength | 1 Hour |
|-----------------------|----------------|
| Full Cure | 6 Hours |
| Temperature Range | -35°C to 180°C |
| Gap Fill | 3mm |

ASTM 01002 Lapshears (Tensile Result)

Steel/steel 20-35 N/mm² Glass/Metal 16-22 N/mm² Polycarbonate * 13 N/mm² On ABS/ABS * 8 N/mm² * Substrate failure

Suitable Substrates

Ferrites, Ceramics, Urethanes, Vinyl, Acrylics, GRP, FRP, Steel, Aluminium, St. Steel Gelcoats, Polyesters, Wood.

Terminology

(1) Working/Open Time: The time interval between application of adhesive to substrate, and the possible assembly/repositioning of the two mating parts @ 20°C (2) Fixture Time: The length of time after the substrate assembly that will allow a joint to support a 1 kg dead weight. (Tested on a 12mm x 25mm overlapped joint @ 200°C)

Technical Notes

Extreme Bond is suitable for paint bake cycles up to 180°C for 20 minutes.

Technical Features

Part A Colour Green Part B Colour Pink Mixed Colour Purple Working Time 2 Minutes Fixture Time 6 Minutes Viscosity 3500cps Flash Point 12°C Specific Gravity 1.02

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