EVO-PLAS TENSOL 70

2 COMPONENT CEMENT

KEY FEATURES

- Forms a glass clear bond
- Excellent weathering resistance
- Can be used to create either a lamination or butt joint for cast acrylic.

DESCRIPTION

Evo-Plas Tensol 70 is a two component acrylic cement that hardens at room temperature by polymerisation. It produces high strength bonds to acrylic sheet and offers excellent weathering resistance.

RECOMMENDED USE

Evo-Plas Tensol 70 is intended for cementing acrylic sheet to itself, but it will bond acrylic sheet to other materials such as wood. Applications include sign making, model making, structural engineering and acrylic sheet repair. Unsupported gaps of up to 1mm can be produced.

Evo-Plas Tensol 70 may also be used to bond extruded acrylic sheet but, will cause surface crazing and stress cracking of the sheet unless the sheet is annealed prior to bonding.

Evo-Plas Tensol 70 is not recommended for structural applications on aircraft.
The bonds obtained using **Evo-Plas Tensol 70** are of approximately the same strength as the acrylic sheet, typical joint strengths are 35 MPa for a cold cured joint and 45 MPa for a post cure heat treated joint.

IMPORTANT

Before embarking on any work involving **Evo-Plas Tensol 70** the safety data sheets for **component A and component B** should be carefully studied by those carrying out the work.

METHOD OF USE

SURFACE PREPARATION

- Substrates to be bonded should be perfectly clean, dry and free from dust and grease, if necessary they can be cleaned with **Bostik Anti-static cleaner**, or **Bostik Cleaner 9.**

ADHESIVE PREPARATION

- **Evo-Plas 70 Component A** must be at room temperature i.e. 16 - 20°C. If it has been stored below 15°C it must be allowed to come to room temperature before use. This could take several hours.
- MIXING RATIO By Weight

Tensol 70 Component A	20 parts
Tensol 70 Component B	1 part

  It is important that this is done accurately otherwise the cement will not harden properly if different proportions are used.
- Add **Component B** to **Component A** and mix thoroughly by stirring, taking care to entrap as little air in the adhesive as possible, after mixing cover the vessel and leave to stand for approx. 5 minutes to allow the larger bubbles to rise to the surface.
- The mixed adhesive must be used and the job completed within 20 minutes of adding **Component B**, hardening begins as soon as **Component B** is added to **Component A**, if not used within 20 minutes it will be difficult to use due to thickening of the adhesive and the bond will be weakened.

APPLICATION

- Cementing operations should not be undertaken at temperatures below 15°C otherwise the setting time may be affected. Ideally the room temperature should be 15 - 25 °C.
- The minimum film thickness that can be successfully used is 5 thou (0.13 mm) thick. Since the adhesive shrinks on curing allowance must be made for this when making butt joints and fillet joints. When bonding edge to face the edge should have a 10° chamfer to allow a sufficient quantity of adhesive into the joint.
- Setting begins as soon as **Component B** is added, the cement should harden within 1.5 - 3 hours at 20+/- 5°C, after this time the joint can be handled carefully. Light machining is possible after approx. 4 hours, but a better finish and stronger joint will be obtained if left for 24 hours.
- Once set the cement continues to harden for some time, after several days the bond strength should be adequate for most applications. However the strength of joints can be increased further by heat treatment
  - Do not heat components until at least 1 hour after cement has set.
  - Non thermoformed components - heat for 3 - 4 hours at 80°C.
  - Thermoformed, highly stretched components - heat for 4 - 5 hours at 70°C.
- Gap filling - Because of its low viscosity the gap filling properties of **TENSOL 70** are limited. Special masking techniques will be needed to keep the cement in place if large gaps are to be filled. In addition the cement shrinks in volume by Approx. 20% as it hardens so cavities must be over filled to allow for this.
- Colour - After prolonged outdoor exposure (years) in warm climates a slight yellowing of the bond line may appear. This will not effect the mechanical properties of the cement.
- If **Component B** becomes deeply coloured (yellow/orange) the hardening time should be tested by mixing a small amount of the two components. Obtain a new bottle of **Component B** if the cement is slow to set.

TYPICAL CHARACTERISTICS		
	Component A	**Component B**
Physical Form	Mobile syrup	Liquid
Colour	Slight blue tinge	Pale straw
Chemical Type	Acrylic	Peroxide
Solvent	Methyl Methacrylate	Plasticiser
Viscosity [mPa.s]	Approx. 1500	
Solids Content [%]	100	Approx. 5
Specific gravity	Approx. 1.03	Approx. 1.2
Flammability	Highly flammable	Highly flammable
Cleaner / Thinner	Bostik Cleaner 5	

BSI STANDARDS

FM1696
BS EN ISO 9001:2000

EMS 53282
ISO 14001

PACKAGING

For current pack sizes please contact the Customer Service Department.

STORAGE

Component A - store in the dark in a dry flameproof area between 16 and 20°C.
Component B - store in the dark at 0 - 5°C. At lower temperatures component B may crystallise out of solution. It is important that all solid deposits are re-dissolved before use. This should be done by **carefully** by warming to Approx. 20°C and shaking.

SHELF LIFE

At least12 months closed in original packaging stored under the above conditions.

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SMART HELP

Please contact your local representative

Bostik Ltd.
Stafford, UK
Phone : +44 (0) 1785 27 27 27
Fax : +44 (0) 1785 22 26 65
www.bostik.co.uk

Bostik S.A.
La Plaine Saint-Denis, France
Phone : +33 (0)1 55 99 90 00
Fax : +33 (0)1 55 99 90 01
www.bostik.fr

Bostik GmbH
Borgholzhausen, Germany
Phone : +49 (0)54 25/801-0
Fax : +49 (0)54 25/801140
www.bostik.de

Bostik B.V.
's-Hertogenbosch, The Netherlands
Phone : +31 (0)7 36 244 244
Fax : +31 (0)7 36 244 344
www.bostik.nl

Tensol 70 TDS01365-01 January 2015