

## PRODUCT DATA

Date: March 2011

Information Sheet No.: B2064-3

# EVO-PLAS TENSOL 70 USER GUIDE

## DESCRIPTION

Tensol 70 is a two component, acrylic adhesive which hardens at room temperature by the polymerisation of the Part A. The Part A is a viscous mixture of acrylic polymer dissolved in monomer. The Part B is a liquid catalyst solution that initiates the polymerisation of the Part A.

## RECOMMENDED USE

Tensol 70 is designed for bonding cast acrylic sheet. It will also bond extruded acrylic sheet, but will cause surface crazing and stress cracking of the sheet unless the sheet is annealed prior to bonding.

The bonds obtained using 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.

## METHOD OF USE

Before using Tensol 70 the Part A must be at 20°C and the workroom must be at 20±5°C to obtain the optimum cure rate and properties of the adhesive.

Surfaces to be bonded should be clean, dry and dust free. If necessary they can be cleaned with petroleum ether or white spirit then washed with water.

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.

Accurately weigh 5 parts of Part B into 100 parts of Part A. It is important that this is done accurately otherwise the adhesive will not cure properly and will give inferior performance.

Thoroughly mix the adhesive by stirring, taking care to entrap as little air in the adhesive as possible. The mixed adhesive must be used within 20 minutes of mixing.

Cover the container and allow the mixed adhesive to stand for 5 minutes to allow the larger air bubbles to rise to the surface of the adhesive.

Do not use adhesive that has been mixed for more than 20 minutes as it will be difficult to use and give inferior final performance.

The adhesive will be hardened sufficiently within one and a half hours to allow careful handling of the assembly. After 4 hours cure the parts can be lightly machined but, for the best results, the joint should be left to cure for 24 hours before further processing.

Once the adhesive has set the final bond strength can be increased by heat curing the material. This can only be done at least one hour after the adhesive has set. Non-thermoformed components can be heated for 3 to 4 hours at 80°C. Thermoformed, highly stretched components may be heated for 4 to 5 hours at 70°C.

### Disclaimer - please read carefully

This disclaimer is issued by Bostik Limited ("the Company") and applies to the use of any products supplied by the Company ("the Products") displayed on this Technical Data Sheet ("TDS"). Please read this disclaimer carefully before using any of the Products. Using this TDS and/or the Product constitutes your acceptance of this disclaimer. Its contents shall prevail over any directions of use and any disclaimer and/or exclusion or limitation of liability of the Company which may appear on the packaging of the Products.

This disclaimer sets out the entire financial liability of the Company (including any liability for the acts or omissions of its employees, agents and sub-contractors) to any user of the Products ("Product User") in respect of any use made or resale by the Product User, of any of the Products in this TDS.

This disclaimer does not affect the Company's liability for death or personal injury arising from the Company's negligence in respect of the Products, or its liability for fraud, or fraudulent misrepresentation, or any other liability which cannot be excluded or limited under applicable law.

The Company's total liability however arising and whether caused by tort (including negligence and breach of statutory duty), breach of contract or otherwise, arising in connection with the use made or resale by the Product User of any of the Products in this TDS shall be limited to the price paid for the Product by the Product User.

The Company shall not be liable to the Product User for any pure economic loss, loss of profit, loss of business, depletion of goodwill or otherwise, in each case whether direct, indirect or consequential, or any claims (including in respect of personal injury insofar as not caused by the Company's negligence) for consequential compensation whatsoever (howsoever caused) which arise out of or in connection with the use made or resale by the Product User of any of the Products in this TDS.

The Company shall not be liable to the Product User in relation to any loss for any use which is inappropriate or use which is otherwise than in accordance with the relevant instructions for use of the Products in this TDS or on the Product. Product Users are advised to confirm the suitability of the Products by their own tests.

This TDS covers just one of a large range of products supplied by the Company. Full information on these products and advice on application is freely available from our fully trained staff throughout the country. In addition, specialist technical advice is available from our Technical Services Department. This TDS supersedes all previous TDSs relating to the Products and users of it must ensure that it is the current issue. Destroy all previous TDS, and if in any doubt, contact the Company, quoting the code number in the top right hand corner on the front of this document.