ENGLISH

Data Sheet

RS Cast Acrylic Bonder - AB1

RS Stock No 144-406

The RS Cast Acrylic Bonder is a ready-mixed, colourless solvent based cement. It consists of acrylic polymer and methyl methacrylate monomer dissolved in solvents.

It hardens as the solvent is absorbed or evaporates, depositing polymer in the joint. In addition the solvent softens the surfaces being joined so that they fuse, hardening as the solvent migrates into the body material. The cement has been specially developed to reduce the problems of rapid drying and 'skinning' common with solvent based cements.

It is a versatile, single part cement suitable for general fabrication work which does not need high bond strength, (i.e. usually for internal applications). It is suitable for joining items made from 'Diakon' acrylic polymers as well as cast acrylic (Perspex).

It should not be used for outdoor applications and cannot be used with Perspex ME, Perspex SW or Perspex AG grades. Nor is it recommended for laminating cast acrylic (Perspex) sheets as crazing will eventually occur.

Polymer base – Methyl Methacrylate
Initial Cure times – 2 to 3 hrs
Full Cure – 24 to 48hrs
Coverage – 10m^2 / litre
Specific Gravity – 1.2kg / litre
Viscosity – 400mPaS
Solids 50%
Cleaner/Thinner – Solvent M
Shelf Life 12 months
Storage - 5 to 30 deg C

The gap filling properties of the cement are limited which means that mating surfaces must be machined to close tolerances.

It must not be used for laminating as the absorption of the solvent is likely to cause distortions and / or stress crazing.

Method of Use

Before embarking on any work involving RS Cast Acrylic Bonder AB1 the Material Safety Data Sheet should be carefully studied by those carrying out the work.

Although RS Cast Acrylic Bonder AB1 was developed so that rapid evaporation and skinning are minimal, the following techniques will reduce these problems further.

Limit exposure to Air before applying the cement.

Dispense the cement directly into the joint using a small flexible polyethylene bottle with a suitable nozzle or a hypodermic syringe with a shortened wide bore needle. Use a dispenser which holds no more cement than is needed for the job. Prevent the nozzle or needle from becoming clogged by inserting a steel wire or pin whenever the dispenser is not being used.

Reduce the evaporation that occurs between applying the cement and assembling the parts
Refrigerate the cement for at least 12 hours before use. A domestic refrigerator is suitable (5 to 10 deg C). If this is not possible, an alternative is to cool the cement containers in cold water, although this is less effective. The quantity of cement needed for the following day or shift should also be kept cool by returning them to the refrigerator after use.

NB. Always recap the cement container immediately after use.

Hardening
Joints can be hardened after about three hours at room temperature but should not be machined for at least 24 hours. Bonds reach their maximum strength after about three weeks at room temperature, but for most applications one to two weeks should be adequate.

To obtain maximum strength more quickly, leave the joint to harden at room temperature for at least 24 hours then heat for 8 hours at 80 deg C.

Migration of Pigments
The solvent in the cement may cause soluble colourants to migrate from one piece of cast acrylic (or other plastic being used) to the next. If colour is important, check for migration by making a small test joint.

Note: this adhesive is not recommended for structural bonding applications on aircraft

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