

WC105 – Technical Data Sheet



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Description

WC105 is a ready-mixed, colourless, solvent-based adhesive. It consists of acrylic polymer and methyl methacrylate monomer dissolved in solvents.

WC105 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 of the substrate. The adhesive has been specially developed to reduce the problems of rapid drying and 'skinning', which is common with solvent-based adhesives.

WC105 is a versatile, single-part adhesive suitable for general fabrication work which does not need high bond strength.

WC105 is suitable for joining items made from 'Diakon' acrylic polymers as well as cast acrylic (Perspex).

Physical Properties

Polymer Base	Methyl Methacrylate
Solids	20% approx
Viscosity	600 mPas approx
Specific Gravity	1.2 approx
Storage	5-25°C

Directions For Use

Although **WC105** was developed so that rapid evaporation and skinning are minimal, the following techniques will reduce these problems further:

1. Limit exposure to air before applying the adhesive - Dispense the adhesive directly into the joint using a small flexible polyethylene bottle with a suitable nozzle or hypodermic syringe with a shortened wide-bore needle.
2. Use a dispenser which holds no more adhesive than is needed for the job. Prevent the nozzle or needle becoming clogged by inserting a pin or wire into it whenever the dispenser is not being used.
3. Reduce the evaporation that occurs between applying WC105 and assembling the parts - In extreme heat conditions it is beneficial to refrigerate the adhesive for at least 12 hours before use. A domestic refrigerator is suitable (temperature 5 – 10 °C). If this is not possible, an alternative is to cool the adhesive containers in cold water, although this is less effective.
4. NB: Always re-cap the tin immediately after use.
5. The initial cure takes about three hours at room temperature but the joint should not be machined for at least twenty-four hours. Full cure takes place within 48 hours but bonds reach their maximum strength after about three weeks at room temperature. For most applications, one or two weeks should be adequate.
6. To obtain maximum strength more quickly, leave the joint to harden at room temperature for at least twenty-four hours and then heat for eight hours at 80°C.

Precaution

1. The gap-filling properties of the adhesive are limited which means that mating surfaces must be machined to close tolerances.
2. Do not use WC105 for sheet laminating as the absorption of the solvent is likely to cause distortions and/or crazing.
3. The solvent in WC105 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 any migration by making a small test joint.
4. Unopened containers do not need to be stored in a refrigerator.
5. Always replace the lid of the container immediately after use to prevent evaporation of the solvent.
6. THIS ADHESIVE IS NOT RECOMMENDED FOR STRUCTURAL APPLICATIONS ON AIRCRAFT.

Please consult the WC105 Health & Safety Data Sheet for statutory regulation information.

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