

TECHNICAL DATA SHEET

ALTUGLAS[®] ADHESIVE S2003E

Single-component transparent, viscous, solvent adhesive.

APPLICATIONS

For bonding Altuglas[®] CN and EX in a range of applications such as POS displays, signs, display cases, etc.

This adhesive can also be used for bonding other plastic materials, such as polystyrene and ABS, after they have first been annealed as a precaution. Prior testing is recommended.

TYPES OF BOND

Edge-to-edge bonding (covers, boxes)

Angled bonding (POS)

Edge-to-surface bonding (raised lettering on signs)

This list is not exhaustive.

The viscosity of Altuglas[®] S2003E means it can be applied to one or both surfaces of the parts to be assembled.

PROPERTIES

Viscosity at 20°C (Brookfield) : 4500-5500 mPa.s

Density at 20°C : 1.01 g/cm³

Flash point : -6°C

Solid content : ≈20%

Storage temperature : between 15° and 30°C

PRECAUTIONS IN USE

Altuglas[®] Adhesive S2003E is extremely volatile. Evaporation resulting from prolonged exposure to the air causes the adhesive to thicken. We strongly recommend that you close the receptacle tightly as soon as you have taken the quantity you require. Caps should be fitted to applicator tubes to avoid them becoming blocked. Adhesive should not be left in the applicator tubes for longer than 24 hours.

TOXICITY AND SAFETY

Altuglas[®] Adhesive S2003E contains no chlorinated solvent.

The solvents are liable to cause irritation:

- Do not inhale the vapours
- Work in a well-ventilated area
- Avoid all contact with the skin and eyes.

Altuglas[®] Adhesive S2003E is classed as highly flammable (F) and irritant (Xi). Store well away from heat and do not smoke whilst using the product.

For further information, see the Safety Data Sheet.

STORAGE PRECAUTIONS

Unopened packages should be stored in a cool, dry, well-ventilated place. If stored in its original packaging, hermetically sealed and at a maximum temperature of 30°C, Altuglas[®] Adhesive S2003E can be kept for up to two years from the date of packaging.

PACKAGING

Altuglas[®] Adhesive S2003E is packed in full cartons of 12 containers, each holding 1 kg. Full cartons cannot be split. The containers are made of metal for safety and corrosion reasons. Each individual package carries essential information from the Safety Data Sheet and the production batch number.

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GUIDELINES FOR USE

Releasing internal strains:

The Altuglas[®] CN and EX components to be glued can be subject to internal strains, caused by various machining or forming operations. Internal strains must therefore be released by annealing, otherwise cracking (crazing) will occur in contact with solvents in the adhesive. If machining (cutting or milling) operations have been performed with efficient cooling (clean water, water + air), simply roughen the surfaces to be glued.

Disc polishing, forming and hot bending lead to an increased risk of crazing, which justifies annealing in an oven (see Altuglas[®] Technical Brochure).

With laser cutting and flame polishing, it is essential that parts be annealed before bonding.

Preparation of surfaces:

Speed is one of the key benefits of solvent-type adhesives. Also, after parts have been annealed, it is only necessary to roughen the edges. The surfaces to be glued must be completely dry and clean. Remove all traces of grease from the parts to be glued, using petroleum ether or a 50/50 mixture of water/methylated spirit. If necessary, areas adjacent to the area being glued can be protected by a special adhesive tape made from adhesive-resistant material (e.g. polypropylene). If necessary, pre-assemble parts using the same adhesive tape.

Applying the adhesive:

Where there is no pre-assembly, use a polyethylene bottle fitted with a nozzle to apply a thin line of glue to one of the two surfaces to be glued.

Exert gentle and even pressure during setting, to avoid squeezing all the glue out of the joint and the formation of shrinkage bubbles caused by solvent evaporating.

To avoid frequent clogging of the nozzle, replace the cap each time after use.

Drying and hardening time:

The external surface of the glued joints will dry in approximately 30 to 35 minutes at 20°C (guide time). Hardening varies with thickness, temperature and humidity. It is usually possible to handle glued objects (carefully) after 60 to 90 minutes, but a minimum of 48 hours must elapse before any machining.

Complete hardening is achieved after 15 to 20 days at a temperature of 20°C. If necessary, this can be accelerated by heating for several hours at 80°C (or only 60°C for a thermoformed part).

PROPERTIES OF JOINTS MADE WITH ALTUGLAS[®] ADHESIVE S2003E

Mechanical strength is determined by traction applied to test samples formed by end-to-end bonding. Measurements have been made using test samples heated for 4 hours at 60°C as well as test samples left to harden naturally for 4 days at room temperature. The values below are given purely for guidance and do not in any way constitute a guarantee.

Tensile strength:

After 4 days of natural hardening	: 28 to 32 Mpa
After heating at 60°	: 38 to 45 Mpa