



ACRIFIX® 1S 0117

1-Component Solvent Adhesive

Product and Use

Type of Adhesive

1-Component solvent adhesive.
Highly fluid, transparent clear, slightly purple to slightly yellow, physically curing.

Applications

For making T-bonds and bonding narrow areas of all kinds of uncrosslinked PLEXIGLAS®, preferably used for PLEXIGLAS® XT. But also for other plastics such as PS, SBC, ABS, PVC-U. ACRIFIX® 1S 0117 is not gap-filling. Excellent capillarity. The bond is firm within a short time. Rapid further treatment possible. High ultimate strength. For other materials, conduct prior tests.

Storage/Transport

Keep container tightly closed in a cool place.
UN 1133

Working Instructions

Normally, a sawn or milled edge of one article is bonded at right angles to the original surface of another. In areas where a high stress level is to be expected, avoid bonding or anneal the parts beforehand to relieve stress. The parts to be bonded must have a very accurate fit. Grooves and notches are not filled. Clean the adherents with petroleum ether or isopropyl alcohol before applying the adhesive. Either of two methods may be used:

- Lock the two parts in position without adhesive and introduce ACRIFIX® 1S 0117 into the joint from a small nozzleed bottle. The adhesive penetrates the joint by capillary action. From a sheet thickness of approx. 5 mm onwards, the parts should first be put together with the aid of spacers (e.g. stainless steel wire, approx. 0.1 to 0.5 mm diameter) at right angles to the sheet edge, which are pulled out after introduction of the adhesive.

- The appropriate edge of one of the parts to be bonded is dipped into ACRIFIX® 1S 0117 and placed in contact with the second part after allowing sufficient time for solvent action – PLEXIGLAS® XT about 30 sec., PLEXIGLAS® GS about 60 sec. After a short holding time, the bond is locked in position. When bonding sawn edges, bubble formation can be reduced by passing the edges over with a scraper or smoothing them with fine abrasive paper (grit 400 to 600 – if possible at right angles to the sheet edge), by milling or diamond cutting before the actual bonding process is started. Slight pressure applied to the bonded surface during drying can also reduce bubble formation.

More Information

The maximum pot life of ACRIFIX® 1S 0117 in an open dish is about 30 min. (or shorter, depending on ambient temperature), because its composition changes by evaporation of predominantly one component.

Whitening around the adhesive joint is due to water condensing from the air (especially if the room temperature is low).

Attention: When pre-bonding with ACRIFIX® 1S 0117, curing of ACRIFIX® 2R adhesives can be impaired. ACRIFIX® 1S 0117 can turn yellow as a result of exposure to light, however the yellowing has no effect on the adhesion. To increase viscosity, ACRIFIX® 1S 0117 can be mixed with ACRIFIX® 1S 0116 at any ratio.

For further details please see our Guideline, "Joining Ref. No.: 311-3".

Properties of Bonds

Initial bond

PLEXIGLAS® GS / PLEXIGLAS® GS: ~ 60 to 90 sec
 PLEXIGLAS® XT / PLEXIGLAS® XT: ~ 30 to 50 sec

Subsequent treatment of bonded items

not within the first three hours

Strength of Bonds

The bonds only acquire their final strength after about 24 hours or after immediate annealing as soon as the adhesive has cured.

Tensile shear strength (v = 5 mm/min)

Material (to itself)	Non annealed	annealed (5 h at 80 °C)
PLEXIGLAS® GS OFOO	30 - 40 MPa	40 - 50 MPa
PLEXIGLAS® XT OAOO	35 - 45 MPa	40 - 50 MPa

Annealing increases the strength and also improves the weather resistance.

Appearance of Bonds

- Colorless, clear.
- Rather more bubbles with PLEXIGLAS® XT and fewer with PLEXIGLAS® GS.
- Bleeding may occur with colored grades.

Limitation of Liability

Our ACRIFIX® adhesives and other service products were developed exclusively for use with our PLEXIGLAS® products and are specially adjusted to the properties of these materials. Any recommendations and guidelines for workshop practice therefore refer exclusively to these products.

Claims for damages, especially under product liability laws, are ruled out if made in connection with the use of products from other manufacturers.

Safety Measures and Health Protection

For further information on safety measures, the exclusion of health risks when handling adhesives and on their disposal, see our Safety Data Sheet.

Availability according to the current sales range.

Typical Values	
Properties	Values
Viscosity; Brookfield A/60/20 °C	~ 0.8 mPa • s
Density (20 °C)	~ 0.98 g/cm ³
Refractive index n _D ²⁰	~ 1.38
Color	transparent clear, slightly purple to slightly yellow; color does not affect bonding properties
Flash point; DIN 53213	< 4 °C
Solids content	≤ 1 %
Storage stability	2 years after filling, if correctly stored
Storage temperature	max. 30°C
Packaging materials	Colored glass and aluminum bottles (with inside coating)
Curing	physically, through evaporation and absorption in the bonded articles
Cleaning agents for equipment	ethyl acetate

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Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

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