

ACRIFIX® 1S 0127

1-Component Solvent Adhesive

Product and Use

Type

1-Component solvent adhesive (thin-bodied, clear, colorless to slightly yellowish).

Application

For making T-bonds and bonding narrow areas of all kinds of uncrosslinked PLEXIGLAS®, preferentially for crack-free bonding also of lightly internally stressed parts, e.g. those made of extruded PLEXIGLAS® XT and injection moldings made from PLEXIGLAS® molding compound. Cracking occurs only in parts with extreme internal stresses.

ACRIFIX® 1S 0127 is not gap filling. The bond is firm within a short time. Rapid further treatment possible. High ultimate strength. For other materials, conduct prior tests.

For commercial use only.

Working Instructions

Normally, a sawn or milled edge of one article is bonded at right angles to the original surface of another. 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:

- a) Lock the two parts in position without adhesive and introduce ACRIFIX® 1S 0127 into the joint from a small nozzled 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 \varnothing) at right angles to the sheet edge, which are pulled out after introduction of the adhesive.

- b) The appropriate edge of one of the parts to be bonded is dipped into ACRIFIX® 1S 0127 and placed in contact with the second part after allowing sufficient time for solvent action – PLEXIGLAS® XT about 20 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 smoothing the edges prior to bonding, either with a scraper or with fine, wet abrasive paper, grit 400 to 600 (if possible at right angles to the sheet edge), or by milling or diamond cutting.

Further Indications

The maximum pot life of ACRIFIX® 1S 0127 in an open dish is about 30 min. (or shorter depending on ambient temperature), because its composition changes by evaporation of predominantly one component.

If the product is stored in PE application bottles, it must also be ensured that the adhesive is always fresh, as its composition changes by evaporation of predominantly one component and solvation is impaired.

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 0127, curing of ACRIFIX®2R adhesives can be impaired.

ACRIFIX®1S 0127 can turn yellow as a result of exposure to light; however, the yellowing has no effect on the adhesion.

To increase viscosity, ACRIFIX® 1S 0127 can be mixed with ACRIFIX®1S 0126 in any ratio.

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

Properties of Bonds

Initial bond

PLEXIGLAS® GS/PLEXIGLAS® GS: ~ 30 sec.

PLEXIGLAS® XT/PLEXIGLAS® XT: ~ 10 sec.

Subsequent treatment of bonded items:

Not within the first three hours

Tensile shear strength

(v = 5 mm/min; butt joints, free from bubbles):

Material (with itself)	non-annealed	annealed (5 h at 80°C)
PLEXIGLAS® GS 0F00:	30 ± 5 MPa	40 ± 5 MPa
PLEXIGLAS® XT 0A000	30 ± 5 MPa	40 ± 5 MPa

Annealing increases the strength and also improves weather resistance.

Appearance

Colorless clear.

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

Storage/Transport

Keep container firmly closed, store in a cool place. UN 1993

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. 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 (20°C)	≤ 15 mPa · s
Density (20°C):	~ 1.15 g/cm ³
Refractive index n _D ²⁰ :	~ 1.41
Color:	Clear to yellowish, color does not affect bonding properties.
Flash point DIN EN ISO 13736:	>= 30°C
Solids content:	≤ 1 %
Storage stability:	2 years after filling if correctly stored
Storage temperature:	Max. 30°C
Packaging materials:	Colored glass and aluminum
Curing:	Physically, through evaporation and absorption in the bonded articles.
Cleaning agents for equipment:	Ethyl acetate

Safety Measures and Health Protection

Labeling according to Regulation (EC) 1272/2008

Danger, contains dichloromethane, nitroethane.



- Highly flammable liquid and vapor (H225)
- Harmful if swallowed. (H302)
- Suspected of causing cancer. (H351)
- Causes skin irritation. (H315)
- Causes serious eye irritation. (H 319)
- May cause drowsiness or dizziness. (H336)
- Harmful to aquatic life with long-lasting effects. (H412)
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
- Wear protective gloves/protective clothing/eye protection/face protection. (P280)
- IF ON SKIN (or hair):
Take off immediately all contaminated clothing. Rinse skin with water/shower. (P303+P361+P353)
- IF INHALED:
Remove person to fresh air and keep comfortable for breathing. (P304+P340)
- IF IN EYES:
Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. (P305+P351+P338)
- Dispose of contents according to local disposal regulations. (P501)

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Evonik is a worldwide manufacturer of PMMA products sold under the PLEXIGLAS® trademark on the European, Asian, African and Australian continents and under the ACRYLITE® trademark in the Americas.

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Evonik Performance Materials GmbH

Acrylic Products

Kirschenallee, 64293 Darmstadt, Germany

info@plexiglas.net www.plexiglas.net www.acrifix.com www.evonik.com

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