ACRIFIX®

ACRIFIX®
Adhesive

ACRIFIX® 1S 0116
1-Component Solvent Adhesive

Product and Use

Type of Adhesive
1-Component solvent adhesive.
Low viscosity, 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, PVCu.
ACRIFIX® 1S 0116 is only slightly gap-filling. The bond is firm within a short time. Rapid further treatment possible. High ultimate strength. For use with other products, 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 become only partially filled. Clean the adherents with petroleum ether or isopropyl alcohol before applying the adhesive. ACRIFIX® 1S 0116 is applied from the tube or a nozzled bottle to the edge of one of the items to be bonded, which, starting from one side, is then placed in contact with the second. 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, wet 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
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 0116, curing of ACRIFIX® 2R adhesives can be impaired.

ACRIFIX® 1S 0116 can turn yellow as a result of exposure to light, however the yellowing has no effect on the adhesion.

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

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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

Strenght 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 0F00	23 - 33 MPa	32 - 42 MPa
PLEXIGLAS® XT 0A000	25 - 35 MPa	32 - 42 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 parts to be bonded.

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.

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Typical Values	
Properties	**Values**
Viscosity; Brookfield II/6/20 °C	650 - 900 mPa • s
Density (20 °C)	~ 1.0 g/cm^3
Refractive index n_D^{20}	~ 1.39
Color	transparent clear, slightly purple to slightly yellow; color does not affect bonding properties
Flash point; (DIN 53213)	< 4 °C
Solids content	approx. 10 %
Storage stability	2 years after filling, if correctly stored
Storage temperature	max. 30°C
Packaging materials	Colored glass and aluminum bottles (with inside coating)
Thinner	ACRIFIX® 1S 0116 can be thinned with ACRIFIX® 1S 0117 at any ratio
Curing	Physically, through evaporation and absorption in the bonded articles
Cleaning agents for equipment	Ethyl acetate

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