



## ACRIFIX® 1R 0350

### 1-Component Polymerization Adhesive

#### Product and Use

##### Type of Adhesive

1-Component polymerization adhesive. Quick-curing. Slightly cloudy, purplish, highly viscous solution of an acrylic resin in methyl methacrylate that polymerizes upon exposure to UVA light, gap-filling.

##### Applications

Preferably used for rapid bonding of double glazing, butt joints and area bonding of clear acrylic, e. g. PLEXIGLAS® GS, PLEXIGLAS® XT and parts made from PLEXIGLAS® molding compound, as well as some other transparent plastics. These must be separately tested for their compatibility.

For commercial use only.

#### Storage/Transport

Keep containers tightly closed in a cool place **protected from light**.  
UN 1133.

#### Working Instructions

##### Preparing the parts to be bonded

Clean the surfaces to be bonded with ACRIFIX® TC 0030, isopropyl alcohol or petrol ether. Internally stressed parts must be annealed before bonding in order to avoid stress cracking. The annealing conditions depend on the type of material, the degree of forming and the thickness of the parts to be bonded. Parts made of extruded and injection-molded acrylic should be annealed as a matter of principle. Typical annealing times – also for cast acrylic – are 2 to 4 hours in an airflow oven at 70 to 80 °C. It is important to ensure that bonded parts are allowed to cool down slowly after annealing.

##### Bonding Technique

Fix the parts to be bonded in the desired position (avoid shading) and apply suitable adhesive tape to seal the joint and to protect surrounding areas. Introduce ACRIFIX® 1R 0350 into the joint by means of a suitable glue dispenser (PE) or disposable syringe, and avoid bubble formation. The adhesive may also be applied using mechanical metering units, but bear in mind that only suitable pumps should be used. Do not apply compressed air to the feed tank. The bond is then exposed to a suitable UVA light source until fully cured (see section "Curing").

ACRIFIX® 1R 0350 for area bonding:

Apply the adhesive as a four-lobed dollop; fold down cover carefully from the edge.

**Attention:** avoid layers exceeding 1 mm – adhesive may foam.

##### More Information

Roughening up with water abrasive paper (grit 320 to 400) or non-woven improves the adhesion to untreated surfaces of PLEXIGLAS®. To improve the joint annealing immediately after joining is recommended. Typical annealing times are 2 to 4 hours in airflow oven at 70 to 80°C. Severely stressed bonds or those intended for outdoor exposure should be annealed as a matter of principle.

To avoid stress cracking in closed cavities (e. g. double glazing, tube interiors), these must be carefully flushed with compressed air after bonding with ACRIFIX® 1R 0350.

For more details see our Guideline "Joining, Ref. No. 311".

### Properties of Bonds

#### Subsequent treatment of bonded items

- 1 to 2 hours after curing

#### 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; cured with Philips Cleo Performance 40 W-R)	non-annealed	annealed (5 hrs at 80 °C)
PLEXIGLAS® XT 0A000	30 - 35 MPa	38 - 42 MPa

Annealing increases the strength and also improves the weather resistance.

#### Appearance of Bonds

clear, almost colorless, slightly cloudy in thick layers

### 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.

### Curing (System: polymerization by light)

	Illuminant	curing time (at 25 °C)
Bond/lamp and lamp/lamp spaced at approx. 20 cm and 10 cm, respectively	superactinic UV-A fluorescent lamp, e.g. Philips TL .../05	3–8 min
	UV-A fluorescent lamp for tanning beds, e.g. Philips Cleo Performance, from 40W	3–8 min
	direct sunlight	2–5 min
	Pot life (at 200 g in glass vessel with diffuse indoor lighting)	~20 min (at 25 °C)

### 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 II/6/20 °C	4500 – 6000 mPa · s
Density (20 °C)	~ 1,02 g/cm <sup>3</sup>
Refractive index n <sub>D20</sub>	~ 1,44
Color	slightly cloudy, purplish
Flash point; DIN 51755	~ 10 °C
Solids content	23 - 27 %
Storage stability	2 years after filling, given correct storage
Storage temperature	max. 30 °C
Packaging materials	Colored glass and aluminum
Thinner	ACRIFIX® 1R 9019
Cleaning agents for equipment	ACRIFIX® TC 0030, ethyl acetate

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