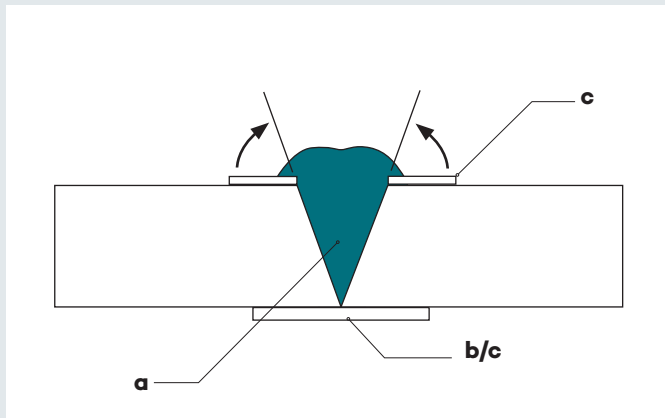


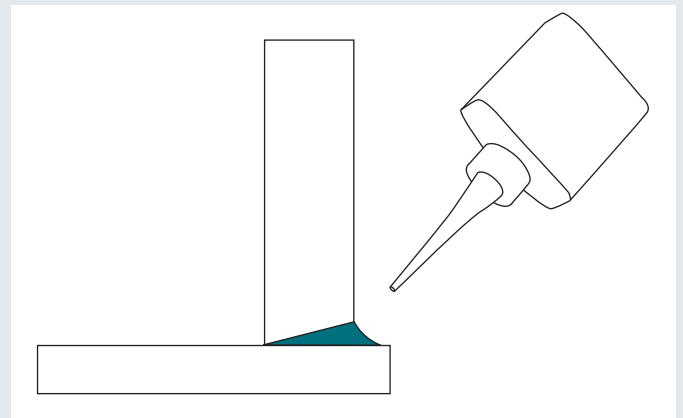


**ACRIFIX®**  
Adhesive

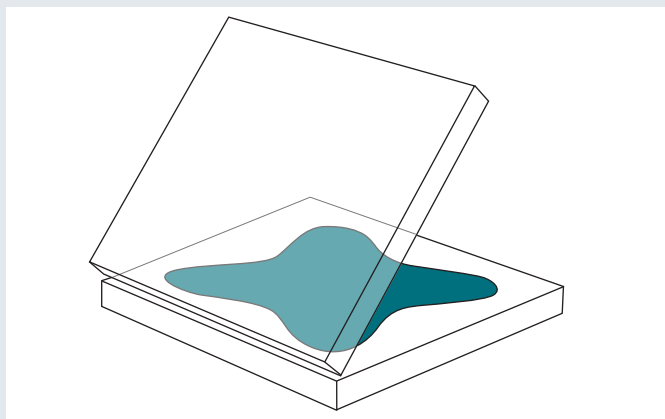
**ACRIFIX® 2R 0190**  
2-Component Polymerization Adhesive



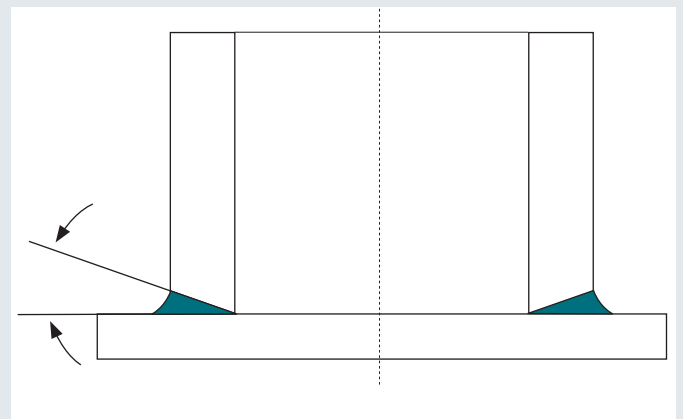
V-groove:  
a = Adhesive  
b = Adhesive tape with nonadhesive center strip  
c = Adhesive polyester or cellulose tape



Angle joint:  
Application of adhesive by PE glue dispenser



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



Bonding a tube end



## Product and Use

### Type of Adhesive

2-Component polymerization adhesive.  
Transparent clear to slightly purple, viscous solution of an acrylic polymer in methyl-methacrylate, which polymerizes upon addition of ACRIFIX® CA 0020.

### Applications

Preferably used for bonding acrylic (PMMA), i.e. PLEXIGLAS® GS, PLEXIGLAS® XT or parts made from PLEXIGLAS® molding compound, with one another. Also suitable for other materials such as ABS, PC, PS, PVC-U, SAN or wood. For other materials, conduct prior tests. ACRIFIX® 2R 0190 is gap-filling. The cured joints are almost colorless.

### Storage/Transport

Keep container tightly closed in a cool place.  
UN 1133

## Working Instructions

### Preparing the Parts to Be Bonded

Degrease 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.

### Preparing the Adhesive

Add 3 to 6 % ACRIFIX® CA 0020 to ACRIFIX® 2R 0190 and stir until no more striation is visible. In the covered container, air bubbles may be allowed to rise to the surface of the adhesive, but they can also be removed in a vacuum desiccator (min. 200 mbar). As soon as the ACRIFIX® 2R 0190 mixture becomes thick and noticeably warm (end of pot life), it should no longer be used.

### Bonding Technique

Fix the parts to be bonded in the desired position and apply suitable adhesive tape to seal the joint and to protect surrounding areas (see drawings). Introduce ACRIFIX® 2R 0190 into the joint either directly from the mixing vessel or by means of a glue dispenser or disposable syringe, and avoid bubble formation.

### More Information

Roughening-up with water abrasive paper (grit 320 to 400) or non-woven improves the adhesion to untreated surfaces of cast acrylic (particularly block material).

To improve the joint annealing 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.

ACRIFIX® 2R 0190 must not get into closed cavities (e. g. double glazing, tube interiors), since the curing process is severely hampered at such sites, and there is a risk of stress cracking in the bonded parts. If cavity adhesion cannot be prevented, the cavity must be rinsed gently with air for at least 20 minutes. In case of tube adhesions it is also recommended to gently blow air through the tube during bonding.

ACRIFIX® 2R 0190 may be colored with ACRIFIX® CO 9073, CO W074, CO 3075, CO 5076, CO 1077, for example.

For more details see our Guideline "Joining, Ref. No. 311-3".



**Properties of Bonds**

**Subsequent treatment of bonded items**

- 3 to 6 hours after curing,
- sanding and polishing after 24 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)**

<b>Material (to itself)</b>	<b>non-annealed</b>	<b>annealed (5 hrs at 80 °C)</b>
PLEXIGLAS® GS OF00	28 - 38 MPa	47 - 57 MPa
PLEXIGLAS® XT OA000	30 - 40 MPa	45 - 55 MPa
PLEXIGLAS® Resist 65	17 - 23 MPa	32 - 38 MPa
PLEXIGLAS® Resist 75	14 - 20 MPa	27 - 33 MPa

Annealing increases the strength and also improves the weather resistance.

**Appearance of Bonds**

The cured bonds are almost clear. With increasing amounts of ACRIFIX® CA 0020 (> 3%) and/or ACRIFIX® TH 0032 a yellowing of the bond is possible. Annealing temperatures > 70°C could also create yellowing. Without annealing it is likely that after a certain time yellowing or whitening due to micro cracks of the joint are possible.

**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 II/6/20 °C	1600 - 2000 mPa • s
Density (20 °C)	~ 1.02 g/cm <sup>3</sup>
Refractive index n <sub>D</sub> <sup>20</sup>	~ 1.44
Color	Transparent clear to slightly purple
Flash point; DIN 53213	~ 10 °C
Solids content	30 - 32 %
Storage stability	2 years after filling, if correctly stored
Storage temperature	max. 30°C
Packaging materials	Colored glass and aluminum
Thinner	max. 10% ACRIFIX® TC 0030 > 10 % ACRIFIX® TH 0032
Curing/pot life (at 200 g adhesive, 20 °C) with 3 % ACRIFIX® CA 0020: with 5 % ACRIFIX® CA 0020:	~ 60 min/~ 25 min ~ 50 min/~ 20 min
Cleaning agents for equipment	ACRIFIX® TC 0030, ethyl acetate

**POLYVANTIS GmbH**

Riedbahnstraße 70  
64331 Weiterstadt  
Germany

[www.plexiglas.de](http://www.plexiglas.de)  
[www.polyvantis.com](http://www.polyvantis.com)

® = registered trademark

Semi-finished polymethyl methacrylate (PMMA) products from POLYVANTIS are sold on the European, Asian, African and Australian continents under the registered trademark PLEXIGLAS®, in the Americas under the registered trademark ACRYLITE®, both owned by Röhm GmbH, Darmstadt, or its affiliates. Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments.

The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.