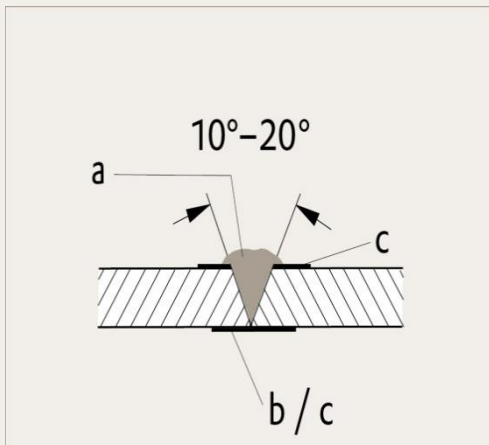


ACRIFIX® 2R 2016

2-Component polymerization adhesive

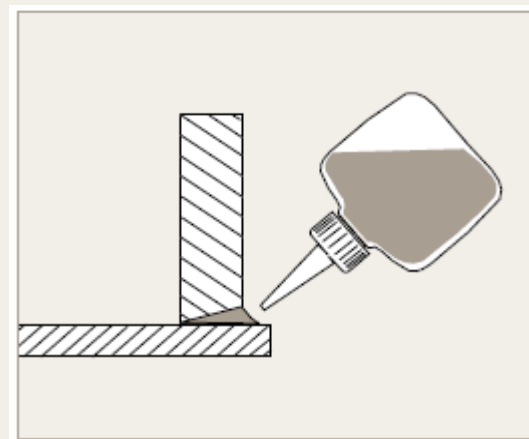


V-groove:

a = Adhesive

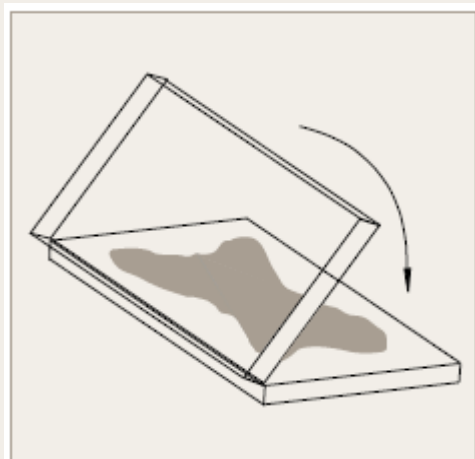
b = Adhesive tape with nonadhesive center strip

c = Polyester or cellulose adhesive tape



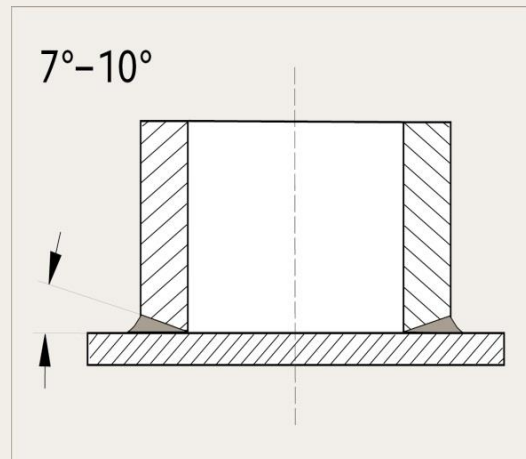
Angle joint:

Application of adhesive by PE glue dispenser



Area bonding:

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



Bonding a tube end

Product and application

Description

2-Component polymerization adhesive. Clear, slightly violet, solution of low viscosity of an acrylic polymer in methyl methacrylate, which cures completely upon the addition of ACRIFIX® CA 0020.

Applications

Adhesive primarily for inside fillet joints (display case design). Preferably used for bonding acrylic (PMMA), i.e., PLEXIGLAS® GS, PLEXIGLAS® XT, or components made of PLEXIGLAS® molding compounds, with each other; but also suitable for other materials, such as ABS, CAB, PS, PVC, SMS, UP, and wood. The cured joints are smooth and almost colorless.

Storage/transport

Keep in the original container tightly sealed; store in a cool location.

UN 1133

Processing instructions

Preparing the parts to be joined

Degrease the surfaces to be joined using ACRIFIX® TC 0030, isopropyl alcohol, or petroleum ether. Internally stressed parts must be annealed before joining 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. Bonded parts made of extruded or injection molded acrylic generally always need to be annealed. 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 2016 and stir until no more striation is visible. Air bubbles rise to the surface of the adhesive best in a closed container. Avoid vacuum degassing. Do not use the ACRIFIX® 2R 2016 mixture any longer once it has thickened and is noticeably warm (end of the pot life).

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 2016 into the joint either directly from the mixing vessel or by means of a glue dispenser or disposable syringe, and avoid bubble formation.

Miscellaneous

Adhesion to unfinished surfaces of cast acrylic can be improved by roughening the areas with sand paper (grit = 230 to 320). Severely stressed bonds or those intended for outdoor exposure should be annealed for 2 to 4 hours at 70 to 80 °C **after** curing. ACRIFIX® 2R 2016 must not get into closed cavities (e.g. double glazing, tube interiors etc.), as these conditions significantly impair the curing process, posing the risk of cracks forming in the part to be bonded. If bonding in a cavity cannot be avoided, the cavity must be gently flushed with air for at least 20 minutes after adhesive application.

For bonding tubes together, we likewise recommend gently flushing the inside of the tubes during the bonding process.

When working with ACRIFIX® 2R 2016, the surface can be made smoother by adding ACRIFIX® SO 0016 surface smoothing additive at a concentration of up to 5 %.

Adding ACRIFIX® SO 0016 makes bonds suitable only for interior use where they will not be exposed to water.

ACRIFIX® 2R 2016 can be colored using products such as ACRIFIX® CO 9073, CO W074, CO 3075, CO 5076, or CO 1077.

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

Properties of Bonds

Processing parts after bonding:

3 to 4 hours after curing;

sanding and polishing after 24 hours

Tensile shear strength ($v = 5 \text{ mm/min}$):

Material (to itself)	annealed (5 hours at 80°C)	
	non-annealed	
Cast acrylic:	35 to 40 MPa	52 to 60 MPa
Extruded acrylic:	40 to 45 MPa	50 to 55 MPa

Appearance:

Almost colorless to slightly yellow. With higher amounts of curing agent (ACRIFIX® CA 0020) and thinner (ACRIFIX® TC 0030), and temperatures > 70 °C, discoloration is possible. The joint whitens slightly upon exposure to water.

Limitation of Liability

Our ACRIFIX® adhesives and other auxiliary agents 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):	500 to 800 mPa · s
Density (20 °C)	~ 1.02 g/cm ³
Color:	Clear, slightly violet
Flash point DIN 53213:	~ 9 °C
Shelf life:	2 years from filling under proper storage conditions
Storage temperature	max. 30 °C
Packaging materials:	Colored glass, aluminium
Thinner:	max. 10 % ACRIFIX® TC 0030
Cleaning agents for equipment:	ACRIFIX® TC 0030 or ethyl acetate
Curing time / pot life (for 200 g adhesive, 20°C) using 3 % ACRIFIX® CA 0020:	~ 50min. / ~ 20min.

Health and safety precautions

Labeling in compliance with Regulation (EC) No.
1272/2008

Danger, contains methyl methacrylate,
ethanediol-1.2-dimethacrylate



- Highly flammable liquid and vapour. (H225)
- Causes skin irritation (H315)
- May cause an allergic skin reaction. (H317)
- May cause respiratory irritation. (H335)
- Keep away from heat/sparks/open flames/hot surfaces. 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)
- Call a POISON CENTER or doctor/ physician if you feel unwell. (P312)
- Dispose of contents/container as directed by local waste disposal ordinances. (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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