

ACRIFIX® 2R 0190 Versatile Reactive Cement

Product and Use

Two-component polymerization adhesive. Clear, with a purple tint viscous solution of an acrylic polymer in methyl methacrylate, which polymerizes completely upon addition of ACRIFIX® CA 0020 (catalyst).

Applications

Preferably used for bonding acrylic (PMMA), i.e. ACRYLITE® premium and ACRYLITE® cast acrylic sheet or parts made from ACRYLITE® molding compounds, as well as to other thermoplastics such as ABS, PET, PC, PS, PVC, and to other materials such as wood. The cured joints are almost colorless.

Typical Values of Properties

- **Viscosity (Brookfield II/12/68°F/20°C):**
1800 +/- 200 cp
- **Density/68°F/20°C:** ~ 1.02 g/cm³
- **Refractive index nD:** ~ 1.44
- **Color:** clear, with slight purple tint
- **Flash point (Closed Cup):** ~ 50°F/10°C
- **Solids content:** 31 +/- 1%
- **Storage stability:** 2 years after filling, if correctly stored
- **Packaging material:** HDPE, PP, aluminum and glass
Thinner and Cleaner: ACRIFIX® TC 0030
- **Cleaning agents for equipment:**
ACRIFIX® TC 0030 or ethyl acetate
- **Curing / pot life (at 200 g adhesive, 68°F/20°C):**
with 3% ACRIFIX® CA 0020: ~ 60 min / ~ 25 min
with 5% ACRIFIX® CA 0020: ~ 50 min / ~ 20 min

Safety Measures and Health Protection

Contains methyl methacrylate. Irritating to eyes, respiratory system, and skin. Sensitization by skin contact possible. Keep away from any source of ignition. Avoid contact with skin. In the event of contact with eyes, rinse immediately with plenty of water and consult a doctor. Wear suitable protective gloves.

Storage / Shipping

Keep the container tightly closed in a cool place.

Preparing the Parts to be Bonded

Degrease the surfaces to be bonded with water containing a detergent (washing-up liquid), or with ACRIFIX® TC 0030 (thinner / cleaner). 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 158-176°F (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. 5.9 in. Hg). 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. 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.

Other Measures

Roughing with abrasive paper (230 to 320 grit) improves the adhesion to untreated surfaces of cast acrylic (particularly block material). Severely stressed bonds or those intended for outdoor exposure should be annealed for 2 to 4 hours at 158 - 176°F (70 - 80°C) immediately after curing.

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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. ACRIFIX® 2R 0190 may be colored with colorants.

Properties of Bonds

Further treatment of bonded parts: 3 to 6 hours after curing. Tensile shear strength ($v = 2 \text{ in./min}$): The bonds only acquire their final strength after about 24 hours or after immediate annealing as soon as the adhesive has cured.

MATERIAL (TO ITSELF)	NON-ANNEALED	ANNEALED (5 HRS AT 176°F/80°C)
ACRYLITE® premium sheet	4786 +/- 725 psi	7542 +/- 725 psi
ACRYLITE® Resist 65 sheet	2900 +/- 435 psi	5076 +/- 435 psi

Limitation of Liability

Our ACRIFIX® adhesives and other auxiliary agents were developed exclusively for use with our ACRYLITE® acrylic sheet products and are specially adjusted to the properties of these materials. Any recommendations and guidelines for workshop practice, therefore, refer exclusively to these products.

Seller's liability shall be limited to the purchase price of the product supplied (or to have been supplied) here-under in respect of which damages are claimed. All technical or other advice by seller, whether or not at buyer's request, with respect to the product, its processing, further manufacture, other use or resale or otherwise, is given gratis by seller and seller shall not be liable for, and buyer assumes all risk of, such advice and the results thereof.

SELLER SHALL IN NO EVENT BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGES, AND REGARDLESS WHETHER THE CLAIM IS BASED ON WARRANTY, CONTRACT, TORT, STRICT LIABILITY, NEGLIGENCE OR OTHERWISE.

Upon satisfactory proof of claim by the buyer, and as buyer's exclusive remedy, the seller will, within a reasonable time, supply the buyer with a replacement product of the same or equivalent type, free of charge, freight prepaid or, at seller's option, refund the purchase price for the product upon return of the product or other delivered material, or the unused portion thereof. Buyer charges for replacements and returns for credit will not be allowed unless authorized by the seller in writing.

For further information on safety measures, the exclusion of health risks when handling adhesives and at their disposal, see our Safety Data Sheet.

Roehm America LLC
Acrylic Products

1796 Main Street
Sanford, ME 04073
USA

www.acrylite.co
www.roehm.com

1-855-202-7467
info@acrylite.co

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