MIX2FIX® GP Aluminum

Product description

MIX2FIX GP Aluminum is a general-purpose, two-part epoxy paste containing a high aluminum-particle content (31% aluminum metal). It can be used to make tough, permanent repairs to metal, ceramics, porcelain, concrete, wood, and some hard plastics.

Basic uses

MIX2FIX GP Aluminum spreads and applies easily to fill large and small gaps on both horizontal and vertical surfaces. When fully cured, conventional metalworking techniques can be used to machine, file, drill, sand, and paint the finished repair.

Use MIX2FIX GP Aluminum to fill holes and cracks; repair broken, worn or damaged parts such as castings, valve bodies, low-pressure pipes, fabrications, tanks, wood and metal fittings; level machinery; make small-scale parts, models, templates and molds; as a general-purpose repair product for aluminum parts, profiles, extrusions and plates.

Benefits

- Simple preparation (1:1 mixing ratio).
- Can be shaped to required profile.
- Repositioning possible for up to 30 minutes.
- Does not shrink.
- Excellent chemical resistance.
- Good adhesion to a variety of metals, ceramics and hard plastics.

Application limitations

- Does not adhere to polyethylene, polypropylene or PTFE.
- See performance data for temperature limits.
- Do not apply at temperatures below 41°F (5°C).
- Not intended for structural applications.

Color

Cured color is Metallic Aluminum Gray.

Packaging

Available for private label. Minimum batch quantities apply. Packaging options to be determined.

How to use

Surface preparation: All surfaces should be clean, dry and free from all contamination, particularly oils and greases, which will impair bond and could lead to premature failure. Ideally surfaces should be abraded with a fine emery cloth, followed by a solvent wipe with dry acetone or commercially available degreaser. Apply mixed product immediately after cleaning to avoid possible post-cleaning contamination.

Mixing and application: Small quantities can be mixed by hand using a spatula or palette knife; larger quantities can be machine-mixed.

Wear impermeable gloves when mixing or handling uncured product. Measure out equal volumes or weights of the two components, using different utensils for each to avoid contamination. Use only the amount needed for the job at hand. Mix thoroughly for a minimum of 3 minutes until uniform in color.

Use spatula or palette knife to apply to clean, dry surface. Mixed product should be used within 25 to 30 minutes to ensure maximum adhesion. Applying product after this time may impair bond strength. Remove excess material before the paste has set.

To achieve a glossy finish, smooth the surface immediately after application with a knife moistened with a solvent such as acetone or mineral spirits. Working time is 60 minutes at 68°F (20°C), but it is recommended that repairs be completed within

Health precautions

- Contains Epoxy Resin. Epoxies are skin/eye irritants and known sensitizers. Direct product contact may cause an allergic reaction in some individuals. Avoid skin/eye contact. Wear impermeable gloves when mixing or handling uncured product.
- Inhalation of dust may be harmful. Avoid inhalation of dust. Wear dust mask and protective eyewear when sanding cured product.
- Ingestion of product may be harmful. Avoid ingestion.
- KEEP OUT OF THE REACH OF CHILDREN.

For additional health and safety information, consult a Safety Data Sheet.

30 minutes to avoid disturbing the repair as it begins to set.

MIX2FIX GP Aluminum will start setting within an hour at 68°F (20°C), depending on volume and temperature: the greater the volume (or higher the temperature), the faster it will set. Allow 6 hours before handling and 48 hours before returning to service. The application can be shaped, filed and polished after 48 hours.

For advice on building multiple layers, please contact PSI's technical services department.

Shelf life: Two years from date of shipment when stored in dry storage area in unopened containers at 68°F (20°C).

Performance Data*

Properties	Results	Test Methods
Uncured Properties		
Composition	Aluminum-filled epoxy resin	
Physical appearance	Paste	
Odor (hardener)	Faint amine smell (no odor when cured)	
Mixing ratio by weight and volume	1:1	
Viscosity	650,000 cps	
Mixed density	15 lb/gl (1.8 g/cm^3)	
Maximum thickness in one pass	<0.47 in (12 mm)	
Application temperature	50 to 95°F (10 to 35°C)	
Work life at 68°F (20°C)	1 hour	
Handling time at 68°F (20°C)	6 hours	
Return to service time at 73°F (23°C)	48 hours	
Cured Properties		
Physical appearance	Metallic aluminum-gray solid	
Hardness, Shore D, 7 day cure at 73°F (23°C)	75	ASTM D2240
Tensile strength	2,500 psi (17.5 MPa)	ASTM D925
Lap shear tensile strength on steel	2,175 psi (15 MPa)	ASTM D1002
On aluminum	1,300 psi (9 MPa)	ASTM D1002
Compressive strength	10,000 psi (69 MPa)	ASTM D695
Temperature limits		
Continuous	-4 to +248°F (-20 to +120°C)	
Intermittent	-4 to +302°F (-20 to +150°C)	
Chemical resistance	Resistant to hydrocarbons, ketones, alcohols, esters, halocarbons, aqueous salt solutions, dilute acids and bases	

** Typical properties are for information only, not for purposes of specification. The data above represents product performance in ideal laboratory conditions. Individual users' experience may vary depending on application conditions.*

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