MIX2FIX® Machinable Ceramic

Product description

MIX2FIX Machinable Ceramic is dry-film lubricant product reinforced with superfine ceramic that cures at ambient temperatures to produce a self-lubricating, impact- and wear-resistant finish that will not rust.

Basic uses

MIX2FIX Machinable Ceramic spreads easily and will fill large and small gaps on both horizontal and vertical surfaces. It can be successfully applied to metal, ceramics,tiles, concrete, wood, and some hard plastics. When fully cured, conventional metalworking techniques can be used to file, machine, drill and polish the finished repair.

Use MIX2FIX Machinable Ceramic to repair worn components, including shafts and keyways, rams, bearing and pump housings, shafts, pipes; sealing surfaces on flanges and joints; and as a general-purpose repair product for metal castings, profiles, extrusions, and plates.

Benefits

- Simple preparation.
- Spreads easily.
- Repositioning possible for up to 30 minutes.
- Can be shaped, machined and polished to the required profile and finish.
- Good chemical resistance.
- Good adhesion to a variety of metals, ceramics and hard plastics.
- Does not shrink.

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 Dark Blue/Gray.

Packaging

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

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 of product 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 hardener and resin using different utensils for each to avoid contamination. Use only the amount needed for the job at hand. Mix together thoroughly for a minimum of 3 minutes until uniform in color.

Use a spatula or palette knife to apply to clean, dry surface and remove excess material before the paste has cured. Mixed product should be used within 10 to 15 minutes to ensure maximum adhesion, as applying product after this time may impair bond strengths.

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 with-

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.

in 30 minutes to avoid disturbing the repair as it begins to set. Do not apply below 41°F (5°C).

MIX2FIX Machinable Ceramic 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. It can be shaped, filed and polished after 48 hours. For advice on building up 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 Method
Uncured Properties		
Composition	Mineral- and ceramic-filled epoxy resin	
Physical appearance	Paste	
Odor (hardener)	Faint amine smell (no odor when cured)	
Mixing ratio by weight and volume	1:1	
Viscosity	2,500,000 cps	
Mixed density	12.8 lb/gl (1.54 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 - 7-day cure at 73°F (23°C)		
Physical appearance	Dark blue/gray solid	
Hardness, Shore D	80	ASTM D2240
Tensile strength	2,500 psi (17.5 MPa)	ASTM D925
Lap shear tensile strength on steel	>1,015 psi (7.0 MPa)	ASTM D1002
On aluminum	>7.0 MPa	ASTM D1002
Taber abrasion (1000 cycles+1 kg load, H18 wheels)	<1.0 gm	
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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