



TECHNICAL DATA SHEET

ALCOLIN MIX 'N FIX FASTSTEEL®

Description

ALCOLIN MIX 'N FIX FASTSTEEL® Epoxy Putty Stick is a fast setting, industrial strength polymer compound that mixes in just one minute to enable fast permanent repairs to anything made of steel or other metals. It also bonds wood, glass, concrete, ceramics, fibreglass, and many plastics. Each handy stick contains pre-measured portions of activator and base – no measuring or mixing tools are necessary. As the epoxy is mixed by hand, the two contrasting colours blend into one colour to indicate complete mixing. The putty like consistency, eliminates drips and runs, facilitates adhesion to the substrate, and allows the material to be shaped and formed as needed before curing begins.



Features & Benefits

- Strong - bonds with superior strength.
- Bonds quickly - 3 minute work life, hardens in 10 minutes.
- Steel reinforced - can be drilled, sawed, sanded, screwed, filed, carved, stained or painted.
- Mixed colour - steel grey, closely matching many metals.
- Sets to a hard finish - can be drilled, sawed, sanded, carved, stained or painted once cured.
- Long work time - for intricate moulding work.
- Waterproof - suitable for underwater applications and bonds to submerged substrates.
- Water smoothable - can be smoothed and formed with a wet finger.
- Easy to use - equal 1:1 ratio.
- 100% solids - will not shrink or pull away, no solvents.
- Chemical resistant - unaffected by most cleaning soaps and other chemicals.
- Heat resistant - can withstand up to 149°C.
- Durable - Suitable for interior and exterior use, will not rust.
- Non-toxic - releases no noxious fumes on curing.
- Non-flammable - contains no solvents.

Applications

- *Rebuilding* small engine parts, fashioning handles.
- *Sealing* leaks, fills cracks and voids in metal, filling rust holes.
- *Forming* nuts and bolts, repair stripped threads.
- *Repairs* to metal tools, equipment ducts, housing and appliances, sink traps.

- *Auto repairs* such as bonding of trim, repairing small dents, oil pans, small parts, filling rust holes, and thread locking.
- *Attaching* fixtures, machine tags, signs, anchor bolts, screws, rods, machine housings.

Adhesion

- ALCOLIN MIX 'N FIX FASTSTEEL® bonds to steel, iron, aluminium, copper and other metals. It also bonds wood, glass, concrete, ceramics, fibreglass, and many plastics.

Performance properties – industry standards

- **USDA** - acceptable for use in federally inspected meat and poultry plants (under the former Food Safety and Inspection Service product approval program).
- **NSF** - certified by National Sanitation Foundation Standard 61 for use in contact with drinking (potable) water.
- **ABS** - certified by the American Bureau of Shipping for use on marine vessels.

Limitations

- Not suitable where a flexible bond is required.
- Does not bond to polyethylene, polypropylene or Teflon.
- Not suitable for structural applications.

Safety instructions

ALCOLIN MIX 'N FIX FASTSTEEL® is non-toxic, however, it is advisable to wear gloves in order to avoid direct skin contact. Individuals with extra sensitive skin should maintain caution and wash hands with soap and water thoroughly after mixing the product, or wear thin plastic gloves. In the event of eye contact, rinse thoroughly and immediately with water. Seek medical assistance if irritation or discomfort persists. May be harmful if swallowed. Keep out of reach of children! Refer to our Safety Data Sheets for further toxicological information and comprehensive handling instructions.

Surface preparation

- In order to achieve optimum adhesion, surfaces should be clean and free of grease and dirt.
- Roughening the surface prior to cleaning with solvent helps ensure a good bond.
- Some surfaces may need to be grit blasted or abraded with a disk pad.
- Poor surface preparation may result in bond failure.

Directions for use

1. Cut or twist off the required amount of product.
2. Mix by kneading with fingers to a uniform colour. If mixing is difficult, warm ALCOLIN MIX 'N FIX FASTSTEEL® epoxy to room temperature or slightly above.
3. Apply to the surface to be repaired within 3 minutes of mixing. Force into any cracks or holes to be filled and strike off excess material, preferably with a tool wetted with clean water. When applying to a damp, wet or immersed area, work the material forcefully into the surface and apply pressure until adhesion begins to take effect.
4. *For best results:* Use damp fingers for easier mixing and application. Remove excess material before hardening begins. For a smooth appearance of the cured compound, hand rub with water or a damp cloth prior to hardening.
5. *Curing:* ALCOLIN MIX 'N FIX FASTSTEEL® epoxy has a work life of approximately 3 minutes. After 10 minutes, it will harden and form a tenacious bond. After 60 minutes, ALCOLIN MIX 'N FIX FASTSTEEL® can be drilled, sawed, sanded, screwed, filed or painted.
6. Cure rate is dependent upon the temperature of the air. The lower the temperature the longer it takes to cure.

Cleaning

- Fresh epoxy can be cleaned with acetone.
- Cured epoxy has to be removed mechanically or heated above 149°C.

Storage stability

ALCOLIN MIX 'N FASTSTEEL has a shelf life of the product is 24 months if stored at room temperature. The unused portion will remain stable for future use if stored in its original package at room temperature.

Product packaging

57g stick (single epoxy stick consisting of activator and base supplied in a reusable clear plastic tube with a plastic friction top.)

Product data

i. Physical data

Colour – Prior to mixing	Grey Outer / Black Inner
Colour – Upon curing	Steel grey
Density (g/cm ³)	2.2
Solids (%)	100

ii. Performance data

Work life (minutes)	3
Hardens in (minutes)	10
Final cure (minutes)	60
Shrinkage (%) - ASTM D-2566	<1
Hardness, Shore D (full cure, 1 hour) ASTM D-2240	80
Lap shear tensile strength, on steel - psi Lap shear tensile strength, on steel - kg/cm ² ASTM D-695	900 63
Compressive strength – psi Compressive strength - kg/cm ² ASTM D-1002	8 000 560
Upper temperature limitations (°C) Continuous Intermittent	121 149
Electrical resistance (megohms) ASTM D257	30 000
Dielectric strength (volts/mil) ASTM D-149	300
Chemical resistance to:	Hydrocarbons, halocarbons, ketones, alcohols, esters, aqueous salt solutions, dilute acids & bases, brake fluid
Water resistance	Waterproof
Shelf life (months @ 24 °C) minimum	24 Months in sealed container

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