



## TECHNICAL DATA SHEET

# ALCOLIN RAPID SET STEEL EPOXY

### Description

ALCOLIN RAPID SET STEEL EPOXY is a 2-part, grey fast-setting, high strength polymer compound that mixes easily for fast permanent repairs to most rigid materials such as fibreglass, concrete, glass, metals, wood, PVC, and natural stone. The product sets to a water and chemical resistant finish, which is grey in colour to match many metals.

### Features & Benefits

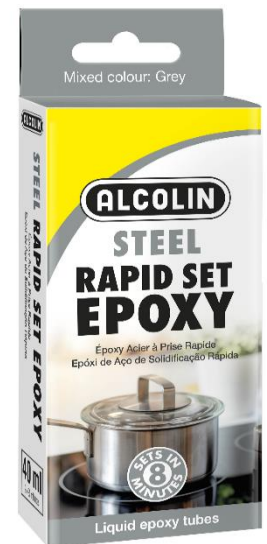
- Strong - bonds with superior strength.
- Fast setting - quick repairs within minutes.
- Grey colour - closely matching many metals.
- Versatile - bonds almost anything.
- Waterproof - suitable for interior and exterior applications.
- Easy to use - equal 1:1 ratio.
- Chemical resistant - unaffected by most cleaning soaps and other chemicals.
- Heat resistant - can withstand up to 100°C.
- Self-levelling - will fill small gaps and imperfections.
- Gap filling - ideal for bonding of surfaces that are not perfect fits.
- Paintable - can be painted over to hide repair.

### Applications

- Ideal for making repairs and assemblies of parts made from ceramics, porcelain, glass, metal, and wood i.e. repairs to metal parts and tools, cracked metal casings, costume jewelry and silver ornaments.
- Ideal for thread-locking and filling dents in metal surfaces.
- Attaching machine tags and signs.
- Ideal for electrical insulation and encapsulation.
- Suitable for repairs and bonding of machinery, electronic and automotive parts.
- Ideal for handicraft applications and gluing of small parts where clamping is not possible.
- Can be combined with fibreglass cloth for a durable patch.

### Adhesion

- ALCOLIN RAPID SET STEEL EPOXY bonds to metals, wood, glass, ceramic plaster, concrete, brick, natural stone such as marble and granite and some plastics such as fibreglass, polyacrylates, polycarbonates, ABS, hard PVC and painted surfaces.



## Limitations

- Not suitable where a flexible bond is required.
- Does not bond to polyethylene, polypropylene or Teflon.
- Not suitable for surfaces that bleed oil, plasticizers or solvents.
- Not suitable for structural applications.
- Not suitable to apply in wet or damp surfaces or for continuous water immersion applications.
- Not suitable for applications requiring heat resistance above 100°C.

## Safety instructions

ALCOLIN RAPID SET STEEL EPOXY is non-toxic; however, it is advisable to wear gloves in order to avoid direct skin contact. 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, dry and free of grease, rust and dirt.
- Wire brushing or sanding the surface prior to cleaning helps ensure a good bond.
- Glass should be degreased with a solvent such as acetone.
- As a precaution, it should be remembered that poor surface preparation might result in bond failure.

## Directions for use

1. Extrude an equal quantity of the two components.
2. Using a spatula, mix these thoroughly, until a homogenous mixture is obtained.
3. Only the amount that can be used within approx. 5 minutes, should be mixed at any one time.
4. Apply the mixture thinly to one or both surfaces to be bonded, ensuring not to exceed the open time of approx. 5 minutes.
5. Join the two parts and hold firmly together for approx. 1 to 10 minute depending on the size, shape and weight of the object. Objects will resist light manual pressure after about 10 minutes.
6. Do not disturb the bonded parts until the adhesive has set.
7. Remove any excess ALCOLIN RAPID SET STEEL EPOXY immediately with acetone.
8. Allow 12 hours for final bond strength to develop before subjecting to any service load.
9. Cold conditions will retard cure time.

## Cleaning

- Uncured epoxy can be cleaned with acetone.
- Cured epoxy has to be removed mechanically or heated above 150°C.

## Storage stability

ALCOLIN RAPID SET STEEL EPOXY EPOXY has a shelf life of at least 24 months if stored in a cool (below 25°C), dry place in its original moisture-tight container. If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but a check should be performed to observe whether the product is still workable. The unused portion will remain stable for future use if stored in its original package at room temperature.

## Product packaging

- 2 x 20ml aluminium tubes

## Product data

### i. Physical data

Colour – Before mixing After cure	Resin (A) – Gray; Hardener (B): White Gray solid
Odour	Resin (A) – light solvent; Hardener (B) - amine
Density (g/cm <sup>3</sup> )	Resin (A) 1.75; Hardener (B) – 1.59
Solids (%)	100

### ii. Application data

Work life (minutes) at 23°C,RH 27%	~ 5 minutes
Final cure (hours) at 23°C,RH 27%	12 hours
Hardens in (minutes) at 23°C,RH 27%	~ 10 minutes
Service Temperature °C	-60°C to 100°C
Shrinkage (%)	>1
Water resistance	Waterproof
Chemical Resistance	Hydrocarbons, oil, alcohols, esters, aqueous salt solutions, dilute acids and bases
Shore Hardness D	80
Shear strength (ABS-ABS) 24h, MPa	2
Shear strength (PC-PC) 24h, MPa	6
Shear strength (St-St) 24h, MPa	12

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