

# KUT EPOXY MORTAR-SP

## Solvent Free Epoxy Lining And Benching Mortar

REP-13-1110



### DESCRIPTION

**KUT EPOXYMORTAR - SP** is a blend of silica aggregates bonded together with epoxy resins specifically developed for use in harsh and aggressive conditions. It is supplied as a three pack product in pre-weighed quantities ready for on-site mixing and use.

### USES

**KUT EPOXYMORTAR - SP** is primarily intended for use in vertical and horizontal patching / resurfacing of both dry and damp surfaces.

It is an ideal product for repair and rehabilitation of manholes and similar enclosed structures because of its low odour, non-sag and excellent chemical resistance to even sulphuric acid as compared to conventional mortars. This makes **KUT EPOXY MORTAR - SP** most suitable product for epoxy lining.

### ADVANTAGES

**Quality:** Pre-weighed quantities ensures rapid installation, consistent quality and reduces errors on the site.

**Bond Strength:** Excellent bonding to almost all the substrates (dry or damp).

**Waterproof:** Cures under damp conditions and is impermeable to water after thorough curing.

**Strength and Durability:** 2 to 3 times stronger than typical concrete and excellent abrasion and impact resistance. These properties ensure permanent life.

**Speed:** Early strength development and hardness.

### TYPICAL PROPERTIES

**Useable life:** 90 minutes at 20°C. 45 minutes at 35°C.

**Curing:** Initial Hardness: 24 hours. Full Cure: 7 days. Below 20°C the curing time will be increased.

**Minimum Application Temperature:** 5°C.

**Density:** Typically 2000 kg/M<sup>3</sup>.

**Tensile Strength:** As per ASTM C-307 at 7 days is 12 N/mm<sup>2</sup>.

**Compressive Strength:** As per ASTM C 579 at 7 days is 70 N/mm<sup>2</sup>.

**Flexural Strength:** As per ASTM C 580 at 7 days is 29 N/mm<sup>2</sup>.

**Modulus of Elasticity:** At 7 days is <8000N/mm<sup>2</sup>.

**Water absorption:** As per ASTM C 413 is 0.3%.

**Bond Strength:** To brick, damp and wet, ASTM-C 321 is 1.75 N/mm<sup>2</sup>.

**After Immersion for 100 days in 17% (w/w) solution of Sulphuric Acid at 20°C.**

Change in weight	1 %
Loss of Compressive Strength	5%

**After Immersion for 100 days in 17% (w/w) solution of Sulphuric Acid at 40°C.**

Change in weight	3%
Loss of Compressive Strength	15%

Appearance of test specimen, 3 sets for each test, the remains were sound after acid immersion and did not exhibit any surface cracking, etching, pitting or softening of the exposed area.

### CHEMICAL RESISTANCE

**KUT EPOXYMORTAR - SP** has strong resistance to a wide range of chemicals prevalent in sewage at a temperature of 40°C such as bleach, detergents, sodium chloride solutions (20%), sodium hydroxide (20%) Sulphuric Acid Solution (17%) w/w.

### INSTRUCTION FOR USE

**Surface Preparation:** All grease, oil, chemical contamination, dust, laitance and loose concrete must be removed by scabbling or light bush hammering to provide a sound substrate.

Metal surface should be degreased followed by grit blasting to **BS 4232: Second Quality** or **SA2.5. (SIS 05 59 00)**.



مصنع الخصوصية لكيماويات البناء  
**SPECIALITIES CONSTRUCTION CHEMICALS FACTORY**

Marketed by: Alghanim Specialities Co. W.L.L.  
Amghara Industrial Area, P.O.Box: 23595 Safat, 13096 Kuwait  
Tel: 1802550 – 400 - Fax: +965 24582548 - Email: sales@spec-kw.com



Priming: Before application of **KUT EPOXY MORTAR - SP**, a primer must be used. The use of **KUT EPOXY PRIMER "N"** or **KUT EPOXY PRIMER "W"** is recommended. Refer respective product data sheet for more details.

**Mixing:** Mechanical mixing is necessary. The total base and hardener components should be thoroughly mixed in the base container and then emptied into a paddle mixer. Add the filler slowly with the mixer running and continue for 2 to 3 minutes until all the components are thoroughly blended.

**Application:** The mixed material should be applied with a steel trowel, to the surface primed as necessary, and whilst the primer coat, is still tacky, press firmly into cracks to ensure positive adhesion. In vertical applications, the material should be "built-up" to a maximum thickness of 12mm, But, in horizontal application, the maximum thickness can be increased by 20mm in small areas where local mechanical support exists. In horizontal application, layers of up to 40-50mm can be applied in chequer board style.

**Sealing Coat:** If recommended **KUT EPOXY PRIMER W** is used as a sealing coat to be applied to the finished surface of the mortar.

**Packaging & Yield:** **KUT EPOXY MORTAR-SP** is available in 16kg packs which yields 8 litres giving a theoretical coverage of 1.6M<sup>2</sup> at 5mm thickness.

## PRECAUTIONS

**Cleaning:** Spillages should be absorbed with sand or earth etc., and disposed in accordance with local regulations. Clean tools and equipment with water/solvents immediately after use.

**Storage:** Store in dry conditions upto 20°C. Shelf life 12 months.

## PERFORMANCE STANDARDS

**ASTM-C 881 - Type I, Grade 3, Class B&C**

**Passes ASTM-C 883 & ASTM-C 884.**

## HEALTH AND SAFETY

**KUT EPOXYMORTAR - SP** should not come in contact with skin and eyes or be swallowed. Avoid prolonged inhalation of vapours. Some people are sensitive to epoxy resins, therefore, protective gloves, goggles and barrier creams should be used. Ensure adequate ventilation and if working in enclosed areas suitable breathing apparatus must be used.

If mixed resin comes in contact with skin, it must be removed before hardening with a resin removing cream, followed by washing with soap and plenty of clean water and seek medical advice. If swallowed, seek, medical attention immediately. Do not induce vomiting.

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