

# KUT DURACOAT EPU

## Flexible protective coating, based on Epoxy-Polyurethane Resin

PPC – 40 - 0512



### DESCRIPTION

**KUT DURACOAT EPU** is based on epoxy-Polyurethane resins and curing agents specially selected for their ability to withstand chemical attack & high temperature. The system consists of pre-weighed base and hardener components, all of which contain reactive elements that are essential to the installation of the system.

**KUT DURACOAT EPU** is applied as a two coat application. it is generally applied at a wet film thickness of 200 micron per coat.

**KUT DURACOAT EPU** is available in a standard Grey colour, other colours are available subject to minimum order quantity.

### USES

**KUT DURACOAT EPU** is a hard wearing, chemical and abrasion resistance floor & wall coating provide protection to concrete and steel structures in aggressive conditions. the material is particularly suitable

- Wall & floor coating for concrete protection
- Chemical manufacturing plants
- Reservoirs & cooling towers
- Manhole & pipe linings
- Sea water tanks, channels and intakes
- Foundation water proofing
- High chemical resistant protective coating for power stations, oil refineries and sewage treatment plants.

### ADVANTAGES

- Flexible coating
- Environment friendly –Totally free of carcinogenic materials like coal tar, pitch and aromatic hydrocarbons
- Durable, low maintenance costs.
- Proven against a wide range of industrial chemicals.
- Liquid applied providing complete protection.
- Specially formulated for use in Middle East conditions.
- Excellent adhesion to concrete, sand/cement and granolithic screeds and metal surfaces.
- Excellent waterproofing system.
- Excellent chemical resistance, UV resistance and resistance to bacterial growth

### TYPICAL PROPERTIES

The following values were obtained when tested at 25°C and 35°C.

Solid content	93 %
Finish	Semi Gloss
Colour	Grey
Specific Gravity (mixed) @ 25°C (ASTM D 1475)	1.40
Pot life (ASTM D 2471)	180 min @ 25°C 120 min @ 35°C
Tack –free time (ASTM D 1640)	7 hours @ 25°C 4 hours @ 35°C 1-2hours @ 45°C
Min.over coating time (ASTM D1640)	9 hours @ 25°C 5 hours @ 35°C 2 hours @ 45°C
Full cure (ASTM D1640)	7 days @ 25°C 4 days @ 35°C
Tensile strength (BS2782 part 3 method 320A)	> 6 N/mm <sup>2</sup>
Elongation @ break (BS 2782 part 3 method 320A)}	>20 %
Adhesion strength (ASTM D 4541))	1.5 – 2.5 N/mm <sup>2</sup>
Service temp	10 to 110°C
Water absorption (%) 24 hr immersion (ASTM D 570)	0.2

### CHEMICAL RESISTANCE PROPERTIES

Fully cured **KUT DURACOAT EPU** samples have been tested in a wide range of aggressive chemicals commonly found in industrial environment.

Acids	
Phosphoric acid 10%	Resistant
Citric acid 10%	Resistant
Acetic acid 10%	Resistant
Hydrochloric Acid 50%	Resistant
Sulphuric acid 10%	Resistant
Nitric acid 10%	Resistant
Alkalis	
Sodium hydroxide 50%	Resistant
Potassium hydroxide 30%	Resistant
Ammonia (0.880) 10%	Resistant
others	
Tap water	Resistant
Sea water	Resistant
Sewage	Resistant

All the above properties have been determined by laboratory controlled tests and are in excess of those expected in practice. Nevertheless, success in use will be determined by the implementation of good housekeeping practices.



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## SPECIFICATION CLAUSE

The corrosion resistant coating shall be **KUT DURACOAT EPU** from **ASPEC**. A tar free, flexible epoxy-polyurethane coating. It shall possess excellent bond to the concrete substrate. The total dry film thickness of the coating shall be minimum of 400 microns. The surface shall be prepared and the coating mixed and applied in accordance with the manufacturer's current data sheet.

## INSTRUCTION FOR USE

**Surface Preparation:** The long term durability of any resin coating system is determined by the adhesive bond achieved between the coating material and the substrate. It is most important therefore that substrates are correctly prepared prior to application.

**Concrete surfaces:** These should normally have been placed for at least 28 days and have a moisture content of less than 5%. Substrate should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by the use of mechanical methods. Dust and other debris should then be removed by vacuum cleaning.

All blow holes and imperfections should be filled with **KUT EPOXY MORTAR FC**

**Steel Substrates:** Steel substrates should be shot blasted to SA2 ½ surface quality (BS4232 - Second Quality) and primed with **KUT BOND EP**. The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

## PRIMING

Priming is not normally required provided the substrate is sound, untreated and good quality nonporous concrete. If any doubts exist of the quality of the concrete, or if it is porous it should be primed with **KUT BOND EP**. Contact **ASPEC** Technical department for advice.

**KUT BOND EP** should be mixed in the proportions supplied. Add the entire contents of the hardener can to the base can. When thoroughly mixed, preferably using a slow speed drill and paddle, the primer should be applied in a thin continuous film, using rollers or stiff brushes. Work the primer well into the surface of the concrete taking care to avoid ponding or over application.

The primer should be left to achieve a track – free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.

**Coating:** The base and hardener components of **KUT DURACOAT EPU** should be thoroughly stirred before the two are mixed together. The entire contents of the hardener container should be poured into the base container and the two materials mixed thoroughly, and then add the colour pot and mix for at least 3 minutes. The use of heavy-duty slow speed, flameproof or air driven drill fitted with mixing paddle is desirable. Mix these components in the quantities supplied taking care to ensure all containers are scraped clean. Do not add solvent thinners at any time.

## APPLICATIONS

The first coat of **KUT DURACOAT EPU** should be applied using a good quality brush, roller or airless spray. A minimum film thickness of 200 microns should be applied. This can be increased where specifications demand.

When the base coat has reached initial cur (7 hours @ 25°C or 4 hours at 35°C). The top coat can be applied by medium haired roller, at minimum film thickness of 200 microns. Care should be taken to ensure that a continuous film is achieved.

**Cleaning:** Tools and equipment should be cleaned with **KUT SOLVENT EP** immediately after use. Spillages should be absorbed with sand or sawdust and disposed of in accordance with local regulations.

## LIMITATIONS

**KUT DURACOAT EPU** should not be applied on to surfaces known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 Appendix A, or by a Hammond concrete / mortar moisture tester type COCO.

**ASPEC** does not recommend acid etching as a method of surface preparation. If used, the method should be approved by the project consultant. In common with all epoxy materials, some slight shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.

## PACKAGING AND COVERAGE

<b>KUT BOND EP:</b>	20 kg pack
<b>KUT DURACOAT EPU:</b>	10 litre packs
<b>KUT SOLVENT EP:</b>	5 litre cans

### • Coverage:

<b>KUT BOND EP:</b>	8 m <sup>2</sup> /ltr
<b>KUT DURACOAT EPU (base coat):</b>	5.0 m <sup>2</sup> /ltr @ 200 microns wft
<b>KUT DURACOAT EPU (top coat):</b>	5.0 m <sup>2</sup> /ltr @ 200 microns wft

**Note:** Coverage figures given are theoretical – due to wastage factors and the variety and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions

## STORAGE

**KUT DURACOAT EPU** has shelf life of 12 months when stored in warehouse conditions below 35°C in the original, unopened packs.

### Cleaning and disposal

Spillages of component products should be absorbed on to earth, sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packing should be in accordance with local waste disposal regulations.

## HEALTH AND SAFETY

**KUT DURACOAT EPU, KUT BOND EP, KUT SOLVENT EP** should not come in contact with skin and eyes or be swallowed. Avoid inhalation of solvent vapours. Some people are sensitive to epoxy resins, hardeners and solvents. Gloves, goggles and barrier cream should therefore be used.

Ensure adequate ventilation and if working in enclosed areas, suitable breathing apparatus is recommended. If mixed resin comes in contact with skin it must be removed before it hardens with a resin removing cream or with soap and water. **DO NOT USE SOLVENT.**

Contamination of skin with any of the above component products should be removed immediately with soap and water. Should accidental eye contamination occur with any of the above products, wash well with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately - **DO NOT INDUCE VOMITING.**

• **Fire:** **KUT BOND EP** and **KUT SOLVENT EP** are flammable. Do not expose to naked flames or other source of ignition. No smoking during use. Containers should be tightly sealed when not in use. In the event of fire, extinguish with CO<sub>2</sub> or foam.

• **Flash points KUT SOLVENT EP:** 33°C

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