



# CPOX PUC HD

## Polyurethane cementitious heavy duty screed

### Selection & Specification Data

#### Description

**PUC HD** is based on latest generation polymers. It is a single layer, seamless polyurethane cementitious flooring system with exceptional flexural strength, impact resistance properties. It is used in industrial kitchens, food processing units, slaughterhouses, pharmaceutical warehouse, Storage areas etc., which are exposed to heavy movement areas.

#### Advantages

- High abrasion resistance.
- Very good impact load due to high flexural strength
- Excellent Chemical resistance. Resists a very wide range of organic and inorganic acids, alkalis, amines, salts and solvents
- Resistance to high temperature.
- Very high life expectancy
- Easy to clean & sterilize.
- Seamless and hygiene finish.
- Complies with Food Grade quality.
- Fast Installation.
- Complies with LEED EQ 4.2 standards and Indian Green Building Council VOC standards.

#### Areas of Application

Typically used in food processing plants, wet & dry process areas, freezers & coolers, dairies, breweries, wineries, distilleries, laboratories, chemical process plants, pulp and paper plants, warehouses and storage areas.

**Colour** As per Standard PU Flooring Shade card

**Finish** Matt

**Thickness** 6 – 9 mm as per requirement ( excluding scratch coat )

**Coverage** 12.0 kg/sqm. 6 mm thick

**Service Temperature** - 40° C. to + 120° C. PUC HD ( at 9mm thick ) can with stand temp cycles about 90 deg C dry heat, and it is ideal for steam cleaning areas.

### Physical Properties

**APPEARANCE** - Coloured free flow material  
**DENSITY** - 2.0 kg./lit.  
**POT LIFE** - 10 minutes  
**CURING TIME** - Tack Free – 2 hrs  
                             Foot Traffic – 10 hrs  
                             Full cure -16 hrs  
                             Full Chemical cure- 4 days

**APPLICATION METHOD:** Should be applied by special trained applicators only.

### Performance Data

Tests	Results
Flexural Strength ASTM D790	20 N/mm <sup>2</sup>
Compressive Strength ASTM D695	65 N/mm <sup>2</sup>
Tensile Strength ASTM C-307	15 N/mm <sup>2</sup>
Bond Strength ASTM C-4541	> 2.5 MPa ( Concrete failure )
Water Absorption	Nil ( Karstner test method)
Concrete Adhesion	Concrete failure
Chemical Resistance	Very Good
Impact Resistance BS 2782 part 3	No failure (2.5 kg load dropped 1 meter)
Abrasion Resistance ASTM D4060	30 mg loss per 1000 cycles ( 1 kg load , H22 wheels )
Decontamination Classification	Good ( as per BS 4247 : Part 1 : Test A)

### Shelf Life

Comp. A & Comp. B : One-year in original unopened containers.

Comp. P , Comp. C : Six months in original unopened containers.

### Packaging

Pre packed in 24 kg of system for immediate used.

Comp .A : 2.70 kg, Comp. B : 2.70 kg, Comp. P : 0.27 kg,  
 Comp. C: 18.33 kg,



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### Surface Preparation

Concrete surfaces must be clean and sound. Remove all dust, dirt, existing paint films, efflorescence, exudates, laitance, form oils, hydraulic or fuel oils, brake fluid, grease, fungus, mildew, biological residues or any other contaminants which may prohibit good bond. Prepare the surface by appropriate mechanical means.

Repairs to cementitious substrates, filling of blowholes, leveling of irregularities, etc. should be carried out using an appropriate mortar

**Edge Terminations :** All free edges of a PUC HD , whether at the perimeter, along gutters or at drains require extra anchorage to distribute mechanical and thermal stresses. This is best achieved by cutting grooves in the concrete. Grooves should have a depth and width of 2 times thickness of the mortar.

Proper groove cutting is required at every 2.5 mtr. In length for proper anchoring of material.

Never featheredge, always turn into an anchor groove.

**Expansion Joints :** Should be provided in the substrates at the intersection of dissimilar materials. Isolate areas subject to thermal stresses, vibration movements or around load-bearing columns and at vessel sealing rings.

**Priming :** Apply PUC Primer (C). Then broadcast selected mineral aggregates on to the wet surface and if require sealed with another coat of CPOX Primer (C) to lock in the aggregate. After curing clean the excess aggregates by brush/broom.

### Application Method

#### Mixing

Mixing will be affected by temperature; condition materials for use from 18°C to 25°C.

Stir Component A first for approx. 15 seconds. Add component B, and mix for approx. 30 seconds with low speed mixer. While mixing, add simultaneously but slowly Component P (pigment pack) and the component C (powder) within 15 seconds. Further mix for 2 minutes until the mixture is homogeneous and the pigment is uniformly dispersed.

### Application Instructions

The mixed material should be immediately laid over the primed surface and spread uniformly with a trowel with minimum groove depth of 8 mm . Take care to spread newly mixed materials across the transition of previous applied mixes before the surface begins to set. Allow mortar to stand for a few minutes to permit entrapped air to escape. Finish the surface using a flat steel trowel, then back roll with a nylon roller to remove trowel marks.

**NOTE:** PUC HD has working time of approximately 10– 15 minutes at 30°C. The working time will vary depending on temperature.

Excessive troweling or back rolling will bring resin to the surface reducing the anti-slip surface.

### Clean Up

Clean all tools and equipment with CPOX Epoxy Thinner 102 . Wash soiled hands and skin thoroughly in hot soapy water . Once hardened, product can only be removed mechanically.

### Maintenance

PUC HD floors are easily cleaned using a stiff brushing action and or high pressure water, preferably hot, and even live steam. Degreasing agents and detergents will assist, but do not use any compounds containing Phenol as the floor colour may be damaged.

### Environmental Conditions

Do not apply while raining or when it is about to rain

### Curing Schedule

DRYING TIME ( 27°C )

Surface Dry : 2 hrs

Hard Dry : 5 – 6 hrs.



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### Limitations

- Do not apply below 10°C or above 30°C / maximum relative humidity 85%.
- Do not apply to un-reinforced sand cement screeds, asphaltic or bitumen substrate, glazed tile or non-porous brick, tile and magnesite, copper, aluminium, soft wood, or urethane composition, elastomeric membranes, fibre reinforced polyester (FRP) composites.
- Do not apply to wet or green concrete or polymer modified patches if the moisture content > 10%.
- Do not apply to concrete if air or substrate temperature is within 3°C of dew point.
- Protect substrate during application from condensation from pipes or any overhead leaks.
- Do not apply to vertical or overhead surfaces
- Do not mix PUC HD materials by hand / mechanical mix only.
- Do not apply to cracked or unsound substrates.

### Health & Safety

Since it is water based coating, **PUC HD** can be safely used. However it is advisable to use protective gloves, respiratory mask and goggles during use. For further details please contact our technical services department

### Special Notes

Drying time may vary according to temperature and humidity

Since it is water based coating care must taken to store the material above 4°C as the material will freeze and become unsuitable for use.

### Green Building Standards

PUC HD complies with LEED EQ 4.2 standards and Indian Green Building Council VOC standards.

### Safety Instructions

Please refer our Material Safety Data Sheet.

**For Further Information, please Contact**

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CPPL/TDS/R11/FLR/ 22-23/30/R2

The information provided in this product data sheet is intended as a general guide only based on our understanding and experience of the products when properly used under normal conditions. The information is given in good faith and owing to variations in actual site conditions which are beyond the control of the company, no liability can be inferred from the information given. Users should determine the suitability of the product for their own particular purpose by their own tests.