

# Talrakrescree PU 3000

Flow applied polyurethane floor topping for  
moderate exposure conditions



The Construction Alchemists

## Description

Talrakrescree PU 3000 is 3- component water based flow applied polyurethane floor topping system that provides a durable, abrasion and chemical resistant floor topping.

## Features & Benefits

- Provides hygienic floor
- Easy to clean.
- Resistant to a wide range of chemicals
- Hard wearing and good impact resistance.
- Slip resistant in dry condition
- Can be applied at 2-3 mm thickness
- Does not taint for most of the chemicals at normal temperature

## Primary Application

The typical applications of the product is for protection of industrial concrete floors subjected to moderate exposure to chemical spillage, abrasion and impact loads. The treated floor exhibits excellent aesthetic surface which is easy to clean.

## Technical properties

Pot Life after mixing full packs \* @ 25°C

Talrakprime UR	20 - 30min
Talrakrescree PU 3000	15 min

Typical Properties at 28 days in controlled environmental conditions at 20°C

\*from the time of mixing and spreading on the floor immediately

Mixed density:	1.65 ± 0.05 g/cm <sup>3</sup>
Bond strength: ASTM D4541	> 2 Mpa
Compressive strength: BS 6319, Part 2	> 45 MPa @ 28 days
Flexural strength: BS 6319, Part 3	> 15 MPa @ 28 days
Tensile strength: BS 6319, Part 7	> 6 MPa @ 28 days
Taber Abrasion: ASTM D4060	1000g at 1000 revolutions
H22 Wheel H17 Wheel :	850 milligram, 70 milligram
Shore D hardness : ASTM D2240	> 80

## Curing Time

Following are the curing times for different uses of the finished floor. The curing time may slightly vary at different temperature

light pedestrian traffic	8 hours
light wheeled traffic	24 hours
Medium duty traffic	48 hours
Full chemical resistance	7 days

## Chemical Resistance

Talrakrescree PU is resistant to a range of common industrial spillages such as inorganic acids, fuels, hydraulic oils, mineral oils and solvents. It is resistant to host of chemicals in food and pharmaceutical industry such as concentrated citric acid, 50% Acetic acid, Lactic acid and alcohols (methanol & ethanol). Occasionally, discolouration may occur on prolonged contact with a few chemicals at elevated temperatures. Good housekeeping recommended to avoid it. However, staining does not affect the product performance and durability.

## Specification Clause

Talrakrescree PU 3000 is 3- component water based flow applied polyurethane floor topping system that provides a durable, abrasion and chemical resistant floor topping.

## Application Instruction

### Pre conditioning of floor

Best results can be achieved at the floor temperature of 15-20°C. The product can be applied outside this temperature range (subject to a minimum of 5°C and maximum of 35°C). But this can affect the surface finish. The filler component can be stored in a cool or warm environment as required in order to control product temperature and working life. The substrate of the floor must be kept at least 3°C above the dew point before priming and to at least 48 hours after application of Talrakrescree PU 3000.

The concrete shall have a surface hardness equivalent to a minimum Rebound Number of 25 when tested using Schmidt hammer and a tensile strength of a minimum of 1.5 MPa when tested using Elcometer Pull out Tester

### Surface Preparation

The surface must be clean, dry (less than 75% RH measured by hygrometer) and free of laitance. To ensure a good bond to the substrate, a 2 mm deep x 3 mm wide groove should be cut around the edges of the floor parallel to and 150 mm from the walls bay joints, up-stands, drains, doorways and at regular points across the floor, and all debris removed. Grinding or light vacuum-contained shot-blasting is preferred for surface preparation. Acid etching and percussive scabbling is not recommended. Laitance and any surface sealer curing membrane, oil should be removed by mechanical means such

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as shot-blasting or grinding to expose the coarse aggregate and oil removal by steam cleaning. After surface preparation, all loose debris and dirt should be removed by a vacuum cleaner.

The concrete floors on grade shall have a damp proof membrane below. If the same is absent a very strong moisture barrier primer shall be applied. In old floors a close visual examination should be made to verify cleanliness and soundness. Any weak or suspect areas should be repaired.

For treatment of surfaces containing expansion joints, guidance from the structural engineer shall be obtained.

## Priming

(i) **Where the concrete substrate has a relative humidity of  $\leq 75\%$**

Priming should be carried out using Talrakpuprime UR, taking particular care to prime but not fill the anchor grooves. Apply Talrakpuprime UR at the required rate depending on the texture and porosity of the substrate. See Coverage. Pour and drain the full contents of the hardener container into the base container and mix thoroughly with a slow speed electric stirrer fitted with an appropriate paddle, for a minimum of 3 minutes until homogeneous. Spread immediately onto the substrate and roll with a short-haired roller to ensure even coverage, until the surface is completely wetted out. If, when cured, there are dry patches, a further primer coat is required. Allow to cure for a minimum 16 hours at  $20^{\circ}\text{C}$ . If the primer has been left to cure for  $>48$  hours then the primer surface should be mechanically abraded and the area re-primed. Contact your local Talrak office for advice.

(ii) **Where the concrete substrate has a relative humidity of  $>75\%$**

Talrakrescreed PU 3000 can also be applied to 7 day old concrete with visible dry surface having a minimum tensile strength (pull-off) of 1.5 MPa. The preconditioning of the floor and surface preparation techniques as described above should be employed. Talrakrescreed PU 3000 should be applied as a primer/scratch coat at 1 mm thickness. This scratch coat is designed to prime and seal the floor. Ensure that anchor grooves are fully filled with Talrakrescreed PU 3000. The scratch coat should be allowed to cure for a minimum of 12 hours and a maximum of 48 hours at  $20^{\circ}\text{C}$  before applying the final Talrakrescreed PU 3000 floor. If the scratch coat has been allowed to cure for  $>48$  hours then the coat must be abraded and a fresh layer of scratch coat applied. The floor shall be checked for any possible surface pores caused by the escape of air or water vapour, one more sealer coat is recommended.

## Application of Talrakrescreed PU 3000 top coat Mixing

Pre-mixing of the coloured liquid base component is essential to ensure re-dispersion of any light settlement. Thoroughly drain the contents of the hardener component into the coloured base component and mix for a minimum of 1 minute or to provide a homogeneous mix. The resultant mixture should then be loaded into a rotary drum mixer and the filler

component loaded and mixed in stages, then mix for three minutes or until a lump-free mix is obtained.

**Never mix Talrakrescreed PU 3000 by hand as this could lead to areas of uncured material.**

## Application

Apply to primed areas, level to the required thickness with a steel float and de-aerate using a spiked roller. Spike rolling should be carried out within 3 minutes of application in order to avoid interfering with flow and surface finish. Ensure that anchor grooves are fully filled with mixed Talrakrescreed PU 3000.

## Protection

The cured product should be protected from direct exposure to traffic using Kraft paper or similar breathable material. Polythene should not be used. Protect the installed floor from damp, condensation and water for at least 4 days.

## Estimating Packaging

Talrakpuprime UR	4 liter packs
Talrakrescreed PU 3000	27.3 kg packs

## Coverage

Talrakpuprime UR	50 m <sup>2</sup> per 10 kg pack (30m <sup>2</sup> - 80m <sup>2</sup> per 10 kg pack dependent on substrate profile and porosity)
Talrakrescreed PU 3000 (scratch coat)	Coverage to give minimum 1 mm thickness profile
Talrakrescreed PU 3000 (floor)	3.9 kg/m <sup>2</sup> (7.0 m <sup>2</sup> /pack) at 2 mm 5.8 kg/m <sup>2</sup> (4.7 m <sup>2</sup> /pack) at 3mm

Note: Coverage figures given are theoretical. Actual site practical coverage figures may vary, due to wastage factors and the type and condition of the substrate.

## Colour stability

Talrakrescreed PU 3000 is available in a selected range of standard colours. Talrakrescreed PU 3000 is not colour fast and may slightly fade over prolonged usage. The rate of change will depend on UV light and heat levels and cannot be predicted. The lighter blue shades are more colour unstable. However this does not compromise the product's performance or chemical resistance characteristics.

## House keeping

Following regular floor cleaning regime will enhance and maintain the life expectancy, slip resistance and appearance of the floor. Talrakrescreed PU 3000 can be easily cleaned using light industrial detergents and equipments. Consult your cleaning chemical and equipment supplier for more information.

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## Storage

Talrakrescreed PU 3000 has a shelf life of 9 months from date of manufacture if stored in unopened containers and under standard warehousing conditions.

## Precautions

### Health & Safety instructions

Talrakpuprime UR and Talrakrescreed PU 3000 should not come into contact with the skin and eyes, or ingested. Ensure adequate ventilation and avoid inhalation of vapours. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provides additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Refer to Product Safety Data Sheets for further information.

## Fire

Talrakpuprime UR and Talrakrescreed PU 3000 are non-flammable.



**Talrak Construction Chemicals Pvt. Ltd.**

An ISO 9001:2015 Certified Company

### Works:

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### Important note :

Talrak products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Talrak endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

Ref :TCC/TDS/IF10 - RI