

# Cemproof PU700

**CEMKRETE**

## Polyurethane Waterproofing for Roof

*Innovative products for your success*

### Description

**Cemproof PU700** is a Poly-Urethane Single component liquid applied to give a tough elastomeric waterproof membrane. It is supplied in one component grade to meet all site application methods and requirements. **Cemproof PU700** is a low viscosity grade for roller, squeegee or spray application to horizontal and vertical surfaces.

### Uses

The high elasticity, excellent bond and low water permeability of **Cemproof PU700** make it ideal for a wide range of water/vapor proofing applications such as foundations, basements, tunnels, plaza decks, pedestrian, concourses, podiums, toilets, kitchens, parking garages, planter boxes, swimming pools, ground floors, suspended floors, car decks, roof terraces, balconies, patios, bridges, precincts, inspection pits, water retaining structures, sewage works, and inverted roofs. The excellent chemical resistance of **Cemproof PU700** makes it particularly suitable for tanking applications in areas where aggressive ground water conditions prevail.

### Advantages

- UV Resistance
- Achieve excellent adhesion, can be applied to a wide range of substrates. Continuous adhesion prevents lateral migration of water
- Achieve outstanding barrier properties ensure protection against corrosive soil conditions
- Achieve thermally stable - irreversible chemical cure eliminates melting and flow at high temperature
- Excellent resistance to oxidation and embrittlement
- Mechanical damage to the membrane can be easily repaired by spot application
- Convenient to use because of the single component
- Liquid application means details are simplified and there are no joints in the membrane
- Highly elastic, cures to give a permanently flexible resilient barrier over a wide range of temperatures
- Rapid installation; significantly reduces time spent on preparatory works and detailing

### Standards compliance

Meets or exceeds the performance requirements of ASTM C 836-84 and **Cemkrete** Standard

### Properties

Tack free time @ 25°C : 6 hours  
Time to full cure @ 25°C : 7 days

Typical cured membrane properties (at 7 days)

#### Elongation

(ASTM D412) : 700 %

#### Tensile strength

(ASTM D53504): 20 N/mm<sup>2</sup>

#### Modulus @ 100%

Elongation (ASTM D412) : 0.70 N/mm<sup>2</sup>

#### Recovery from 350%

Elongation (ASTM D412) : 95 %

#### Tear resistance

(ASTM D624) : 15 N

#### Water Vapor Transmission

for 1.3mm film (ASTM E96) : 8.5 g/m<sup>2</sup>/24 hrs.

#### Permeability

(ASTM E96) : 0.050 ng/m<sup>2</sup>/sec/Pa\*

#### Shore A hardness

(ASTM D2240-80) : 30

#### Shore Hardness

(ASTM C836-81): 80-85

#### Artificial weathering :

No loss of flexibility after 4000 hours exposure

#### Extensibility after heat aging (min. requirement – extended to 6.4mm without cracking) :

No cracking or tearing

#### Service temperature

(continuous ambient) : -40°C to 80°C

\* 1ng = 10-12kg

### Chemical Properties

**Cemproof PU700** is unaffected by a range of mild acids, alkalis and water borne salts and is resistant to bio-deterioration.

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### Instructions for Application

#### Preparation

All surfaces to be waterproofed should be sound, clean and dry. Concrete surfaces should have a light steel-trowel followed by a fine hair-broom or equivalent finish which is dry and free of dust, oil and other contaminants. All high spots should be removed. Moss and lichen must be removed physically followed by treatment with fungicidal wash to kill any spores and inhibit further growth. After treatment wash down thoroughly with clean water and allow to dry. All metal surfaces should be made clean of paint, oils, rust and other contaminants. Abrade to expose bright metal then wipe clean with Solvent (Thinner AAA) prior to priming.

#### Application

**Cemproof PU700** should be applied by brush, trowel, squeegee or airless spray (two coat application for standard grade on vertical surfaces) at a minimum wet film thickness of 1.2mm (1.2 liter/m<sup>2</sup>). This is in addition to the preparatory work. The minimum application life (after opening the pack) is up to 48 hours if stored in closed containers. On a vertical surface a film build of 1.3mm is achievable in two coats. In critical applications where surety of film thickness is paramount, two coats should be applied at right angles to one another. Quantities per coat should be gauged to give the specified final film thickness.

A short haired synthetic pile roller should be used if applying by roller. For spray application, use a Graco King type pump with 60:1 ratio at pressure 5.5 bar (80 psi), hose diameter 13 mm with a 10 mm wip end. Tip size: 0.58mm - 0.84 (23-33 thou). If a water test is to be run, the membrane should be fully cured.

#### Flood Test

Prior to placement of protection, flood to a minimum depth of 50 mm of water for 24 hours. Drains shall be plugged and barriers placed to contain the water

### Curing and Protection

**Cemproof PU700** membrane must be cured for a minimum of 24hours @ 25°C before placing protection. Where damage to the membrane is possible (by traffic, backfilling, etc) it should be protected by a cementitious screed or protection boards. A dust coat of cement should be used to prevent adhesion of the membrane to the boards. Where a bond with the topping is not required, a separator sheet should be used. To prevent damage to the membrane it is recommended that **Cemproof PU700** is laid in strips of 1 metre width to permit the application of a screed or Protection Board from the uncoated area.

### Cleaning

The working equipment, tools etc., can be mechanically cleaned by using brushes in combination with Water. The cleaning should be done immediately after the completion of the work and within the pot life of the material to avoid sediments on the equipment tools etc.

### Additional Information

**Cemcrete** manufactures a wide range of those complementary products which include:

- Waterproofing membranes & waterstops
- Joint sealants & filler boards
- Cementitious & epoxy grouts
- Specialized flooring materials
- Fireproof coating and systems
- Concrete admixture
- Repairing material

For further information on any of the above, please consult your local Cemcrete office - as below.

#### Important note

Cemcrete products are guaranteed against defective materials and are sold subject to its standard conditions for the supply of goods and services, copies of which may be obtained on request. Whilst Cemcrete endeavors to ensure that any advice, recommendation, 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.