

Fast setting, pure polyurea elastomeric waterproof membrane

## Uses

Anti-corrosion, waterproof and protective membrane for concrete and steel in a wide range of environmental conditions.

Typical applications include:

- Below grade waterproofing
- Tank coating
- Waste water tank lining
- Marine environment
- Roof waterproofing
- Aquarium lining
- Landscape & water containment
- Waterparks
- Line striping
- Secondary containment
- Airports

## Advantages

- Very low VOC
- Excellent chemical resistance, thermal stability and UV resistance (some discolouration may occur)
- Very fast turn-around time. The coated substrate can be put into service within an hour
- Excellent impact, abrasion and puncture resistance
- Seamless and monolithic, including field joints
- Significantly enhances the durability of reinforced concrete
- Low permeability values
- Can be applied at ambient temperatures from -30°C \* to 70°C
- Suitable for use in potable water applications - complies to AS/NZS 4020-2005

## Description

Fosroc Polyurea WPE110 is a spray-applied, 100% solids, flexible, two-component, rapid curing pure Polyurea system, designed as a waterproofing and protective coating. It combines the advantages of seamless coating with very long life cycles and high durability.

The system offers excellent surface properties and overall physical properties.

## Technical Support

Parchem offers a technical support service to specifiers, end-users and contractors, as well as on-site technical assistance.

## Properties

Typical physical properties @ 21°C unless stated otherwise

Property	Test Method	Result
<b>Solids by Volume:</b>		100%
<b>Viscosity A component:</b>		500-600 cPs
<b>Viscosity B component:</b>		800 cPs
<b>Density @ 25°C:</b>		1.0 kg/L
<b>Tensile Strength:</b>	ASTM D412	14.8 MPa
<b>Tear strength:</b>	ASTM D624C	60 - 65 N/mm
<b>Elongation:</b>	ASTM D412	>350%
<b>Shore D:</b>	ASTM D2240	40
<b>Abrasion resistance (1kg, H18 wheels):</b>	ASTM D4060	95 mg / 1000 cycles
<b>Cure time, walkable</b>		2 minutes

## Processing parameters

<b>Block temperature:</b>	60°C to 70°C
<b>Hose Temperature:</b>	60°C to 70°C
<b>Volume ratio:</b>	1:1
<b>Pressure:</b>	2000 to 2500 psi
<b>Gel time:</b>	5 to 10 seconds
<b>Trafficable (light):</b>	15 to 20 minutes
<b>Post cure:</b>	24 hours

Refer to Method Statement for further details.

## Application Instructions

### Surface preparation

All surfaces should be clean, dry and free from contamination. The surface should be assessed and treated in accordance with ISO 8504.

### Concrete

Dry abrasive blasting, wet abrasive blasting, vacuum-assisted abrasive blasting, and centrifugal shot blasting, as described in ASTM D4259, may be used to remove contaminants, laitance, and weak concrete, to expose blow holes, and to produce a sound concrete surface with adequate profile and surface porosity. All blow holes and minor surface imperfections shall be filled with recommended filler prior to application of Primer.

### Bare Steel

All welding seams must have a surface finish which ensures that the quality of the membrane system will be maintained in all respects. Holes in welding seams, undercuts, cracks, etc. should be avoided. If found, they must be remedied by welding

# Fosroc® Polyurea WPE110

and/or grinding. All weld spatters must be removed. All sharp edges must be removed or rounded off in such a way that the specified film thickness can be build-up on all surfaces. The radius of the rounding should be minimum 2 mm.

The steel must be of first class quality and should not have been allowed to rust more than corresponding to grade B of ISO 8501-1:2007. Any laminations must be removed.

Blast cleaning to Sa 2½. (ISO 8501-1:2007). Roughness: using abrasives suitable to achieve a coarse surface of Grade Medium G (50-85µm, Ry5) (ISO 8503-2)..

## Priming

After preparation, the substrate shall be primed with either Nitomortar 903 or Nitoprime 320PU.

When using Nitomortar 903, for concrete, suggested application rate is 250 - 300ml per m<sup>2</sup>; For steel substrates, a rate of 150ml per m<sup>2</sup>.

When using Nitoprime 320PU, for concrete, suggested application rate is 150g per m<sup>2</sup>.

Broadcast of fire-dried sand is recommended for optimum adhesion properties.

The primer shall be allowed to become tack free prior to application of Fosroc Polyurea WPE110.

Refer to Method Statement for further details.

## Spray Equipment

A high pressure spray proportioning machine/ spray gun for plural heated polyurea components.

A list of appropriate equipment is listed in the Method Statement.

## Application

Product must be applied by specialist applicators experienced in the application of polyurea products.

Do not dilute Fosroc Polyurea WPE110 or associated primers under any circumstances.

Normal recommended minimum applied thickness of Fosroc Polyurea WPE110 is 1.5mm DFT for external waterproofing and 2.5mm to 3.0mm DFT for submerged conditions.

Use Fosroc Solvent 10 for the flushing of equipment. If material has been stored for a period of time prior to use, thoroughly mix the WPE Part B component with a drum mixer until a homogenous mixture and colour is obtained.

Refer to Method Statement for further detail.

## Colour

It should be noted that Fosroc Polyurea WPE110 is an aromatic polyurea; therefore, as with all aromatics, over a period of time colour change will occur if exposed to UV rays. This will not have any negative effect on the physical properties of the product.

## Disposal Considerations

Cured Fosroc Polyurea WPE110 and cured Fosroc Nitomortar 903 can be disposed of without restriction. The uncured A and B components should be disposed of according to local environmental laws and ordinances.

“Drip free” containers should be disposed of according to local environmental laws and ordinances.

Refer to material safety datasheets for all relevant information on Fosroc Polyurea WPE110 Part A and Fosroc Polyurea WPE110 Part B.

## Cleaning

Fosroc Polyurea WPE110 should be removed from tools and equipment with Solvent 10 immediately after use. Cured material can only be removed mechanically.

## Estimating

### Supply

	Material code
<b>Polyurea WPE110 Part A 22.5 kg:</b>	FC007088-22.5KG
<b>Polyurea WPE110 Part A 225 kg:</b>	FC007088-225KG
<b>Polyurea WPE110 Part B 20 kg:</b>	FC007089-20KG
<b>Polyurea WPE110 Part B 200kg:</b>	FC007089-200KG
<b>Nitoprime 320PU 20kg:</b>	FC007092-20KG
<b>Nitomortar 903 Part A Base 20 litre:</b>	FC381019-20L
<b>Nitomortar 903 Part B Hardener 10 litre:</b>	FC381018-10L
<b>Fosroc Solvent 10:</b>	4 and 20 litre cans

### Coverage

**Nitomortar 903 as primer:** approx. 4m<sup>2</sup> / litre on concrete

**Nitoprime 320PU:** approx. 6.5m<sup>2</sup> / kg

**Fosroc Polyurea WPE110:** 1.0 to 3.0 litres / m<sup>2</sup> depending on specification\*

\* Note: 1.0 litre/m<sup>2</sup> coverage rate is the minimum and requires a highly experienced operator for even and effective coverage, with a cross-hatch spray pattern.

Normal minimum recommended coverage is 1.5 litres/m<sup>2</sup>.

3.0 litres/m<sup>2</sup> rate is the maximum coverage rate for a single coat application.

## Storage

### Shelf life

Fosroc Polyurea WPE110 has a shelf life of 12 months from date of manufacture if kept in a dry store in the original, unopened drums. Refer to the Use by Date indicated on the packaging.

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## Polyurea WPE110

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### Storage conditions

Store in dry conditions in the original, unopened containers. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

### Safety handling

Avoid contact with eyes and skin. Wear suitable protective clothing, gloves and eye/face protection at all times. Ensure adequate ventilation and avoid inhalation of vapour and aerosol. Use a "supplied air" hood.

Fosroc Polyurea WPE110 Part A, Nitoprime 320PU and Nitomortar 903 may cause sensitisation by inhalation and skin contact.

In case of eye contact, first aid must be administered immediately. The eyes should be held open while flushing with a continuous low pressure stream of water for at least 15 minutes. Seek medical advice immediately. If swallowed, seek medical attention immediately - do not induce vomiting.

The use of barrier creams provides additional skin protection. Please refer to material safety datasheets for detailed information.

### Important notice

A Safety Data Sheet (SDS) and Technical Data Sheet (TDS) are available from the Parchem website or upon request from the nearest Parchem sales office. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

### Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.