

Fosroc® Nitocote PUR

A fast setting, rapid curing, 100% solids, flexible, aromatic, two component spray applied polyurea coating for steel and concrete substrates

Uses

To provide protection to concrete and steel structures in aggressive chemical exposure or immersion conditions.

Advantages

- 100% solids (low VOC)
- Good chemical resistance
- Seamless
- Low temperature flexibility
- Easily applied at any required thickness

Description

Nitocote PUR is a fast setting, rapid curing, 100% solids, low VOC, flexible, aromatic, two component spray applied polyurea coating for steel and concrete substrates.

Design Criteria

Nitocote PUR is designed to be applied using 1:1 plural component, impingement spray equipment. When necessary, Nitocote PUR can be used in conjunction with fibre reinforcement in transitional areas.

Properties

Mix ratio:	1:1 by volume
Potlife (70°C):	2 - 4 seconds
Tack free time:	15 – 20 seconds (dependent on substrate temperature)
Recoat (20°C):	0 – 6 hours
Return to service:	
Foot traffic	1 – 4 hours
Full service	10 – 24 hours
Viscosity (70°C):	50 ± 20 cps
Density (mixed):	1.05 g/cm ³
Hardness (ASTM D-2240):	50 ± 5 D
Tensile strength (ASTM D-412):	20 MPa
Elongation (ASTM D-412):	425% ± 20%
Tear resistance (ASTM D-412):	450 ± 50 pli
Water vapour permeability:	(ASTM E-96) 0.65 g/hr/m ²
Water absorption:	< 0.5% (ASTM D-471, 24hrs @ 23°C)

Taber abrasion (CS17 wheel):	< 6 mg
Crack bridging (ASTM 836):	Pass
Flexibility (ASTM D1737):	Pass
Potable water (AS/NZS 4020):	Pass
Adhesion:	
Concrete (dry, un-primed)	> 3 MPa (concrete failure)
Concrete (primed)	> 3 MPa (concrete failure)
Steel (blasted)	> 6 MPa

Results are typical only and do not constitute a product specification.

Specification Clauses

Chemical and abrasion resistant lining

The chemical and abrasion resistant coating shall be Nitocote PUR, a fast setting, rapid curing, 100% solids, low VOC, flexible, aromatic, two component spray applied polyurea coating specifically designed to provide a protection to steel and concrete surfaces.

Application Instructions

Preparation - Concrete surfaces

All surfaces must be dry, smooth, sound and free from debris and loose material. Surfaces must be free from contamination such as oil, grease, dust, loose particles and organic growth. Concrete surfaces must be fully cured, laitance-free and free from any traces of shuttering release oils and curing compounds.

All surfaces should then be grit blasted to remove all foreign matter, open up blow holes and provide a suitable key for Nitocote PUR.

All blow holes and imperfections should be filled with Nitomortar BH. Failure to fill blow holes and imperfections in the substrate will result in coating defects.

All concrete surfaces to be coated should be primed with Nitocote PUR Primer applied at a rate of 5 m²/litre.

Nitocote PUR application can occur as soon as the primer is tack free.

Steel surfaces

All surfaces should be grit blasted to meet the requirements of AS1627.4 Class 2.5. The lining work should be programmed so that newly cleaned steel is coated before the reformation of rust or scale.

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Mixing

Prior to use Part B to be thoroughly mixed with air driven mixing equipment until a uniform colour is obtained.

Application

Nitocote PUR should be applied using a 1:1 plural component spray equipment with impingement spray gun. The spray equipment must be capable of producing a minimum of 2000 psi and of heating the individual components to approximately 77°C.

Part A and Part B should be pre-conditioned to 20 - 30°C prior to introduction to the pump. All spray lines should be heated so as to maintain a product temperature of 70 - 77°C from the pump to the impingement spray gun.

Nitocote PUR is typically applied at thickness of greater than 2 mm. Spray application is carried out as per standard spray painting techniques, using multi directional, overlapping spray passes.

Cleaning

Nitocote PUR should be removed from tools and equipment with Solvent 10 immediately after use. Cured material can only be removed mechanically.

Limitations

Nitocote PUR is formulated for application to clean, sound concrete and steel. It should not be applied over existing coatings.

Nitocote PUR is not colour stable when exposed to direct sunlight, nor when in contact with some chemicals.

Not to be stored at temperatures greater than 30°C.

Do not open drums until ready for use. Any part used drums should be purged with dry air or nitrogen prior to resealing.

Estimating

Supply

Nitocote PUR:	378 litre pack (189 litres kits of Part A and Part B)
Solvent 10:	4 and 20 litre pails

Product code

900555	Nitocote PUR Part A 189L
900666	Nitocote PUR Part B 189L

Coverage

Nitocote PUR:	Typically applied at greater than 2 mm dft (approx 0.5 m ² per litre)
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The coverage figures are theoretical – due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be substantially reduced.

Coverage figures obtained will be heavily influenced by the nature of the substrate and its preparation.

Storage

Shelf life

12 months if kept in a dry store between 5 - 30°C in the original, unopened containers.

Storage conditions

Store in dry conditions at temperatures between 5°C and 30°C in the original, unopened containers. If stored at high temperatures, the shelf life may be reduced.

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.



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