

Fosroc® Nitomortar 903



constructive solutions

Solvent free, general purpose, epoxy binder and priming system

Uses

For combining with selected fillers and aggregates to produce epoxy mortars of various consistencies. Also used as supplied, or with selected filler additions to produce bolt or starter-bar grouts, and as a priming system with some Nitoflor epoxy flooring products; Nitocote epoxy coatings and Fosroc Polyurea systems (refer to the product data sheets).

Can be mixed with fine aggregates to produce mortar of different consistencies for fast and permanent patch repair of concrete floors, particularly where high strength, abrasion and chemical resistance is required.

Advantages

- Early development of initial hardness, minimises maintenance disruption
- Unaffected by a wide range of acids, alkalis and industrial chemicals
- Up to 90MPa compressive strength - depending on mix consistency
- Versatile mixing consistencies for a wide range of applications

Description

Nitomortar 903 is a two-component, low viscosity, epoxy resin system to which Nitomortar Fillers can be added to produce epoxy mortars having a variety of consistencies. Nitomortar 903 also forms part of the Nitoflor epoxy flooring range as a priming system.

Technical support

Parchem offers a comprehensive range of high performance, high quality concrete repair and construction products. In addition, Parchem offers a technical support package to specifiers, end-users and contractors, as well as on-site technical assistance.

Design criteria

A variety of consistencies can be obtained when Nitomortar Fillers are used in conjunction with Nitomortar 903. Refer to Application instructions for details on mix designs.

Properties

The following results were obtained at a temperature of 23°C, unless otherwise specified.

Pot life:	30 minutes
The pot life quoted refers to the binder system without addition of fillers. This value will increase as filler is added to mixed product or if the mixed product is applied in thin layers.	
Mix ratio (by volume):	2:1 Base:Hardener
Mix ratio (by weight):	100:45 Base:Hardener
Initial hardness:	24 hours
Full cure:	7 days; below 20°C the curing time will be increased
Minimum application temperature:	5°C
Maximum service temperature:	60°C
Specific gravity (mixed):	1.1
Viscosity (mixed):	approx. 500cps
VOC content:	12g / litre
Chemical resistance:	
Citric Acid 10%	Excellent
Tartaric Acid 10%	Excellent
Acetic Acid 5%	Satisfactory
Nitric Acid 25%	Good
Hydrochloric Acid 25%	Excellent
Sulphuric Acid 50%	Very Good
Sodium Hydroxide 50%	Excellent
Diesel Fuel/Petrol	Very Good
Sugar Solutions	Very Good
Lactic Acid	Very Good
Hydrocarbons	Very Good
Phosphoric Acid 50%	Very Good

Application Instructions

Preparation

All grease, oil, chemical contamination, dust, laitance and loose concrete must be removed by scabbling or light bush hammering to provide a sound substrate.

Steel surfaces should be grit blasted to white metal. Surfaces which show any traces of oil must be degreased with a chemical degreaser prior to grit blasting.

Priming

When using as a general primer for roll / spray coats apply at a rate of 6m² / ltr. If the substrate is very porous a second coat may be required in patches or in full. Allow the primer to cure and apply the coating system within 24 hrs. Any longer will require a surface sand and solvent wipe prior to coatings application.

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Priming for dry mortar mixes used for coving, ramps, patches requires a tack coat prime prior to applying the mortar. Allow Nitomortar 903 to tack off but remain tacky while application of the mortar otherwise the mortar will slide over the surface. Dry mortars may require an additional seal coat after curing, prior to the application of the finished coating system, to avoid a patchy look.

For priming very porous concrete, Nitobond EP should be considered. Refer to Parchem for guidance.

Mixing

As primer: The entire contents of the hardener can should be stirred and added to the base container and mixed thoroughly for 3 minutes using a heavy duty drill and spiral mixer, taking particular care to scrape the sides and bottom of the container.

IMPORTANT: Once mixed the product should be poured into flat, open paint trays to maximise pot life working time. Holding the product in the original mixing can will lead to an exothermic reaction which will significantly reduce the pot life.

As mortar: Mix the required amount of Nitomortar 903 as per the Coverage section. To this mixed binder then add the required amount of F4 Fillers to achieve the consistency required. A forced-action mixer is essential. Mixing at a slow speed (400/500 rpm) in a suitably sized drum using appropriate equipment such the Ransom 140 x 600 M14 Helical mixing paddle (product code: N4020892-UNIT) fitted to a heavy-duty 1600W mixer, such as Ransom 1602 E (product code: NP7EV160-UNIT) or equivalent.

In cold weather, materials should be stored between 15°C - 20°C for 24 hours before use.

Mixing part packs

It is recommended that full packs be mixed, however for applications where smaller quantities of product are required, experienced applicators may elect to mix part packs using the mix ratio shown in the Properties section of this document. In doing so the contractor accepts the risk of any off-ratio mixing.

Reliable scales should be used to weigh out individual components.

Cleaning

Nitomortar 903 should be removed from tools, equipment and mixers with Fosroc Solvent 10 immediately after use.

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.

Estimating

Supply

Nitomortar 903:

FC381025-1.5L	1.5 litre Pack
FC381025-6L	6 litre Pack
FC381019-20L	20 litre Base component
FC381018-10L	10 litre Hardener component

(200 litre drums of resin and hardener also available)

Coverage

Nitomortar 903: 5 - 6 m²/litre (as primer)

Litres of mixed 903 binder	Litres of F4 fillers	Kg of F4 fillers	Yield Litres	Consistency	7 day compressive strength
1	2	2.95	2.4	Fluid paste	76 MPa
1	3	4.42	3.2	Stiff paste	56 MPa
1	4	5.90	4.0	Trowellable	50 MPa
1	5	7.37	5.0	Dry mortar	45 MPa

Note: the coverage figures for Nitomortar 903 are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced.

Storage

Shelf life

Nitomortar 903 has a shelf life of 36 months at 20°C if kept in a dry store in the original packs. Refer to the Use by Date indicated on the packaging.

Storage conditions

Store in dry conditions in the original, unopened packs. If stored at high temperatures, the shelf life may be reduced.