Fosroc®
Nitomortar EL

constructive solutions

Trowel-applied, high strength, high chemical and abrasion resistant epoxy liner system - (5 mm to 12 mm thickness)

Uses

A trowellable epoxy mortar with maximum chemical and abrasion resistance for the protection of concrete and similar substrates. Ideal for rehabilitation of manholes, lining of outfalls, sewers and similar structures.

Advantages

- Unaffected by a wide range of acids, alkalis and industrial chemicals
- Superior chemical and physical bond to virtually all substrates, dry or damp
- No need for priming concrete surfaces, therefore cutting labour costs and reducing risk of bad priming. Prepacked for ease of mixing. Equipment can be cleaned with water
- No harmful vapours present
- Strengths generally in excess of concrete to which material is applied. Excellent resistance to abrasion and impact
- Cured material provides long lasting waterproof barrier
- Unaffected by freeze-thaw attack which eliminates problems often encountered with conventional water-based materials

Description

Nitomortar EL is a solvent free, three component system consisting of epoxy resins and a special blend of chemical resistant fillers. The two epoxy components (both pourable) change to a gel upon mixing. Addition of the chemically resistant aggregate results in a thixotropic consistency for easy trowellability.

A simple and cost effective material for overhead, vertical, horizontal patching and resurfacing to both dry and damp surfaces. The low odour, non-sag, and chemical resistant properties of Nitomortar EL make the ideal material for long lasting manhole wall rehabilitation.

Nitomortar EL can be used in brick, block and precast concrete substrates and manholes. Provides a permanent impermeable, high strength, monolithic lining to the interior of manhole and trunk line walls and ceilings.

For large applications, a sprayable high build system, Nitocote EP500, is also available. Contact Parchem for further information.

Properties

The following results were obtained at a temperature of 20°C unless otherwise specified.

Compressive strength at 7 days:	70 MPa
Pot life:	3 hours @ 20°C 2 hours @ 30°C
Initial hardness:	4 hours @ 20°C
Full cure:	7 days @ 20°C
Minimum application temperature:	5°C

Chemical resistance:

Performance of Nitomortar EL blocks continually immersed at 20°C:		
Bleach		Excellent
Detergent		Excellent
Sodium hydroxide	20%	Excellent
Sodium Chloride	20%	Excellent
Diesel fuel/petrol	100%	Excellent
Sulphuric acid	15%	Excellent

Design Criteria

Nitomortar EL can be applied in sections up to 50 mm thickness for horizontal locations. The material should not be applied at less than 5 mm thickness. In vertical applications, the material should be “built-up” to a maximum thickness of 12 mm.

Greater thicknesses than those specified above can be achieved by the application of subsequent layers.

Application Instructions

Preparation

Clean the surface and remove any dust, unsound material, plaster, oil, paint, grease, corrosion deposits or algae. Roughen the surface and remove any laitance by light scabbling or grit-blasting. Saw cut or cut back the extremities of the repair locations to a depth of at least 5 mm to avoid feather-edging and to provide a square edge. Break out the complete repair area to a minimum depth of 5 mm up to the sawn edge.

Prior to application of Nitomortar EL all active hydrostatic leaks must be stopped by the use of a rapid setting hydraulic cementitious mortar or Nitofill PU grout.

Mixing

Nitomortar EL is supplied in the correct proportions to facilitate easy on site mixing. A slow speed electric drill with a suitable paddle can be used for efficient mixing. Satisfactory mixing can be achieved by removing the filler component bag and then thoroughly mixing all contents of the resin (part A) and hardener (part B) in the original container. Mix continuously for approximately 5 minutes until a uniform colour and gel-like consistency has been reached. The aggregate should then be added and mixing continued, ensuring that the aggregate is thoroughly wetted out with resin.

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Application

Apply with spatula or trowel. To avoid sagging on vertical and overhead surfaces, DO NOT apply mortar greater than 12 mm per layer. Build up to desired level and strike off.

Note: DO NOT thin components as solvents will prevent proper cure.

Nitomortar EL should be applied only when the substrate temperature and the ambient temperature is above 5°C.

Do not attempt to mix part packs as incorrect proportioning can severely affect the cured properties of the product.

Cleaning

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

Limitations

Nitomortar EL should not be used when the temperature is below 5°C and falling. Do not mix part packs under any circumstances. If any doubts arise concerning temperature or substrate conditions, consult your local Parchem sales office.

Estimating

Supply

Nitomortar EL 6 litre pack:	FC342095-6L
Fosroc Solvent 10:	4 and 20 litre pails

Coverage

Nitomortar EL:	0.5 m²/ 6 litre pack at 12 mm thick 1.0 m²/ 6 litre pack at 6 mm thick

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

Storage

Shelf life

12 months at 20°C if kept in a dry store in the original, unopened bags or packs.

Storage conditions

Store below 35°C in dry conditions in the original, unopened packs.

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