

HIGH PERFORMANCE ELASTOMERIC CEMENTITIOUS WATERPROOF COATING FOR CONCRETE AND MASONRY

Description

NIROPROOF ELASTOCEM is an elastomeric flexible, two component polymers modified cementitious system that requires only onsite mixing forming ideal waterproof coating on concrete, masonry, and most other construction materials. NIROPROOF ELASTOCEM can simply be applied by stiff brush, roller or trowel to obtain the desired thickness.

NIROPROOF ELASTOCEM will bridge an existing crack of up to 0.5 mm in width, or up to 1.2mm when reinforced with 100% virgin polypropylene woven fabric.

Uses

NIROPROOF ELASTOCEM is a high performance elastomeric cementitious coating used for waterproofing and to protect atmospherically exposed reinforced concrete structures from attack by acid gases, chloride ions, oxygen & water.

- NIROPROOF ELASTOCEM is suitable for all types of structures like,
- Water-retaining structures subjected to movements
- Basement-waterproofing
- To protect concrete from water, carbonation and de-icing salts.
- Waterproofing of roofs, sunken floors in bathrooms, Swimming Pools, Drainage culverts, Kitchens, Shower rooms, WC, etc.
- Waterproofing coating for drinking water tanks, sumps, etc.
- Foundations in contact with ground water under saline conditions

Advantages

- Withstands high positive and negative hydrostatic pressures
- Waterproof-suitable for water retaining structures.
- Allows water vapour to escape from the structure.
- Excellent barrier to carbon dioxide, chloride and sulphate ions.
- High resistance to the effect of long-term weathering, durable in all climate conditions including UV attack.
- Nontoxic - ideal for potable water tanks.
- Flexible, with thermal expansion similar to concrete.
- Excellent bond to concrete and masonry
- Bonds to green or damp concrete.
- Good crack accommodation capacity.

- Minimum surface preparation needed and low labour costs.

Standards compliance

BS 6920: 2000 Effect on Water Quality.

DIN 1048: Water Penetration Test.

BS EN 13501-1 classification (Class A2-s1,d0).

Characteristics

Mixed Density	: 1850 kg/m ³
Mixing Ratio, by weight	: 3 (powder) : 1 (liquid)
Pot Life	: 120 Minutes at 25°C : 30 Minutes at 40°C
Recoatible	: 8 – 10 Hours
% Elongation	: >50% (Ambient) : >30% (under water)
Tensile strength	: >20 kg/cm ²
Water penetration (at 1mm DFT) (DIN 1048)	: 5 bars - Resistance to positive water pressure : 3 bars - Resistance to negative water pressure
Static crack accommodation	: >1 mm

Directions for use

Surface Preparation

The surface to be coated must be clean and sound. Remove all traces of formwork, release agents, previous coatings, laitance and any other contaminants that may affect the bond adversely. Suitable cleaning methods include high pressure water jetting and grit blasting. Mechanical wire brushing may be appropriate for small areas. After the above surface preparation, surfaces must be thoroughly washed with clean potable water to remove all dust and loose particles.

Spalled surfaces or those containing large blow holes, cracks and other such defects should be repaired using NIROMORTAR range (concrete repair mortars). For further advice on suitable repair mortars, contact our local representative.

Mixing

NIROPROOF ELASTOCEM is supplied in premeasured units and should be mixed on site utilizing clean containers. Slowly add the powder to the liquid and mix, using a slow speed drill fitted with a suitable paddle. Leave the mixed material to stand for 5 minutes to allow for full saturation to take place. Remix to restore the consistency. Do not mix more material than can be used in half an hour.

Application

Always apply NIROPROOF ELASTOCEM to pre-dampened surface. High-suction substrates require more dampening than dense substrates. However, make sure there is no free-standing water. Apply by brush or broom. Mixed material must be used within 30 to 45 minutes, or less under hot weather conditions

First Coat: Brush or broom the mix firmly onto the pre-dampened, prepared surface. Care must be taken not to spread the material too thinly. When the material begins to drag or "ball", do not add more liquid/water but dampen the surface again.

Second Coat: Allow at least overnight to cure before applying subsequent coats. Dampen the first coat and remove excess moisture. Brush or broom the mix onto the surface (as above) finishing in the opposite direction to the first coat.

With reinforcing mesh: 100% virgin polypropylene woven mesh is used to reinforce NIROPROOF ELASTOCEM. Embed the mesh in thick base layer of approximately 0.5 mm thickness, covered with the first coat of NIROPROOF ELASTOCEM while base coat is still wet. Ensure that the mesh is a minimum of 200 mm wide when treating existing cracks, joints, junctions.

Curing

Under hot or excessive drying conditions fog-spray after the initial set has taken place for as long as practicable. In cold, humid or unventilated areas it may be necessary to leave the application for a longer time curing period or to introduce forced air movement. Never use dehumidifiers during curing periods.

Coverage

Each square metre will require approximate 0.9 Kg of mixed material per layer. The coverage rate for each layer will be strongly influenced by the roughness of the substrate.

1.8 kg / m² in two coats to achieve 1 mm thickness.

Equipment Cleaning

Not hardened material may simply be removed with water.

Packaging

NIROPROOF ELASTOCEM is available in 4kg and 20kg pack.

Technical support

NIRMAN CHEMICALS provides technical advisory services for on-site assistance and guidance on mix design, optimum dosage evaluation of trials.

Storage and Shelf life

NIROPROOF ELASTOCEM should be stored above freezing temperatures. Store under cover, out of direct sunlight and protect from extremes of temperature. In tropical climates the product must be stored in an air-conditioned environment.

Shelf Life: Shelf life of the powder is 9 months and liquid are 12 months when stored as recommended. Depending on storage conditions, the shelf life may be greater than stated. Please contact our local representative regarding suitability for use and dosage recommendations if the shelf life of NIROPROOF ELASTOCEM has been exceeded.

Safety precautions

NIROPROOF ELASTOCEM does not fall into the hazard classifications. However, it should not be swallowed or allowed to come into contact with the skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with the eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Fire

NIROPROOF ELASTOCEM is not flammable.

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact our local NIRMAN CHEMICALS representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labor involved in the application are beyond our control.



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