POLYCOTE NPW

Acrylic modified cementitious Negative-Positive waterproofing material

Description:

POLYCOTE NPW is supplied as two component acrylic modified waterproofing materials. Dry component consist of proper blend of cementitious materials and liquid component consist of white acrylic emulsion. The product is designed to be easily mixed on site using a slow speed drill fitted with a mixing paddle and then applied to the substrate using either brush, trowel or spray. Roller application may also be used, however finish the surface with a trowel. Properties of cured coating (21 days cure at 23°C, followed by 28 days immersion at 23°C).The values obtained are for POLYCOTE NPW when applied in two coats each of 1 mm wet film
thickness.

Uses:

POLYCOTE NPW provides a cementitious, coating with inherent crack- bridging ability. Typical applications include:

- Terrace garden, sunken slab, roofs
- Toilet, bathroom
- Potable water retaining structures
- Potable water excluding structures
- Basement waterproofing
- Drainage culverts

Advantages:

- Withstands high positive and negative hydrostatic pressures
- Excellent crack accommodation before and after immersion
- Provides good working time
- Approved for use in contact with potable water
- Excellent bond to concrete and masonry
- Easy application by brush, trowel or spray
- Bonds to green or damp concrete
- POLYCOTE NPW, available in grey and white, cures to form an elastomeric impermeable membrane.

Product Standard Compliance:

- BS 6920: 1990
- DIN 1048
- BS 476: 1987 Parts 6 and 7
- ASTM D 412-98a & IS 2250:1981

Company Standard Compliance:

Techanical Information:

Properties	Result
Pot life at 20°C	2 hours
Pot life at 35°C	1 hour
Color	Grey or white
Mixed density	1850 kg/m3
Minimum application temperature	5°C
Maximum application temperature	35°C
VOC content	0 g/L

Resistance to positive Water pressure (DIN 1048)	7 bar (up to 70 m head of water)
Resistance to negative Water pressure (DIN 1048)	3 bar(30 m head of water)
Abrasion resistance (ASTM D4060)	Wear Index 1 (Equivalent to 40 N conc.)
CO2 diffusion resistance (Tay wood method) after 5,000 hrs QUV2	> 50 m

NOTE:

- UV test required coating to be exposed to 4 hrs. Condensation at 50°C followed by 4 hrs. UV light at 50°C. Total exposure time was 5,000 hours.
- POLYCOTE NPW will bridge an existing crack of up to 2.6 mm in width.

Specification:
The waterproofing coating shall be POLYCOTE NPW, an acrylic cementations coating approved under the UK WBS (WRc Listed) Scheme No. 9509517. The cured coating, after Immersion, shall be capable of withstanding cracked substrate cyclic movement from 0-300 microns at 15°C for 6,000 cycles without failure. It shall have the capability to resist a positive water pressure of 7 bar and a negative water pressure of 3 bar when tested to DIN 1048.

Application Procedure:
Preparation of surface:

- All surfaces which are to receive the coating, must be free from oil, laitence, grease, wax, dirt or any other form of foreign matter which could affect adhesion. Typically, concrete surfaces can be cleaned using high pressure water jet or grit blasting. Spelled surfaces or those containing large blowholes, cracks and other such defects up to 10 mm depth, should be repaired. Protect adjacent surface with suitable covering which is not supposed to have waterproofing.

Mixing:

- The liquid polymer (5 kg) is poured from the plastic container into a plastic or metal drum having a volume of at least 20 liters. To this, the powder is gradually added (15 kg) whilst mixing with an approved spiral paddle attachment on a slow speed drill. Mixing is continued until a lump free slurry is obtained. This should take a minimum of 3 minutes and a maximum of 5 minutes.

Application:

- **Brush application:**
  After filling cavity, honeycombs and formite holes proceed with further process. Pre-dampen the substrate surface with water. High porosity substrates will require more dampening than dense substrates. Any condensation should be removed using a sponge. Any running water should be stopped with Plug fast. When the concrete surface is damp, apply the material using a soft bristled brush (120 mm- 200 mm wide) or trowel the first coat should be applied at a minimum wet film thickness of 1 mm and should be well brushed into the surface. Finish in one direction for a neat appearance. If the brush begins to drag during application, do not add water to the material, but dampen the surface again. Seal around PVC pipe with sealing gasket and have a primer coat. Assure if sealing gasket is properly adhesive to the surface than perform waterproofing process further. This system can be further reinforced with a reinforcing mesh embedded between two waterproofing layers if there is requirement.
- **Spray application:**
  For spray application the substrate should be prepared in the same manner as for brush application and the material should again be applied in two coats. Each coat should be a minimum of 1 mm thickness. Allow a minimum of 5 hours cure at 20°C or 3 hours at 35°C between the first and second coats, or longer at lower temperatures.
- **Positive side waterproofing:**
  Apply 1.5 mm total thickness for all standard application i.e. foot traffic, non-tiled balconies and up to 4 mm water head.
  Apply 2 to 2.4 mm total thickness for application exposed to hydrostatic pressure > 4 m water head, decks etc.
- **Negative side waterproofing:**
  Apply in 2 coats in 1.6 mm total thickness base coating After 24 hour waiting period apply top coat two component POLYCOTE NPW @ 1.6 mm thickness & apply in two coats.
- **Note:**
  Apply at least 2 coats of material with application thickness maximum 3 mm.

Disposal:
Waste mixed material should be allowed to harden overnight then disposed of as nonhazardous waste.

Cleaning:
Immediately after application is completed clean all tools and equipment with clean water. Hardened material can be removed by mechanical means.

Coverage:
(At nominal 1 mm thickness) Brush, roller, trowel application 100 to 120 ft²/20 kg pack @ 1 mm thickness.
(Actual coverage will depend on surface texture and thickness of coating)

Packaging:
Powder component
(Grey or white): 15 kg bags
Liquid polymer component: 5 kg container

Limitations:

- Do not proceed with application when rainfall is imminent unless in a sheltered or protected location. The product should not be exposed to moving water during application.
- POLYCOTE NPW should not be used for applications subject to direct exposure to sea water.
- Do not overcoat waterproofing material with solvent-based materials

Storage & Shelf-life:
Shelf life is 6 months in unopened packs stored below 35°C in a shaded environment. The liquid component must not be allowed to freeze.

Health & Safety:
POLYCOTE NPW is non-toxic but it is alkaline in nature. Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with clean water. In the event of prolonged irritation, medical advice should be sought. Should use a dust mask while handing the powder.

Fire:
POLYCOTE NPW is non-flammable.

Indian Green Building Council

It is the practice of increasing efficiency with which buildings use resources- energy, water and materials-while reducing building impacts on human health and the environment.

CERTIFIED COMPANY ISO 45001:2018

ISO 45001 is the world's international standard for occupational health and safety, issued to protect employees and visitors from work-related accidents and diseases.

CERTIFIED COMPANY ISO 9001:2015

ISO 9001:2015 is a globally recognized standard for quality management systems (QMS). It helps organizations of all sizes and sectors to: Improve performance, Meet customer expectations,Demonstrate commitment to quality, and Identify and improve processes that lack consistency.

CERTIFIED COMPANY ISO 14001:2015

ISO 14001 is the internationally recognized standard for environmental management systems (EMS). It provides a framework for organizations to design and implement an EMS, and continually improve their environmental performance

GEV-EMICODE Ec1 PLUS Very low emission

This symbol is used to identify Redwop products which give off a low level of volatile organic compounds(VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.), an international organisation for controlling the level of emissions from products used for floors.

GREEN INNOVATION

Our Commitment To The Environment Redwop products assist Project Designers and Contractors create innovative LEED (The Leadership in Energy and Environmental Design) certified projects, in compliance with the U.S. Green Building Council.

CERTIFIED COMPANY ISO/IEC 17025:2017

ISO/IEC 17025 enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and around the world.

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