SPERKTRON Penetration

Penetrating Waterproofing Compound

DESCRIPTION

Cement-based, penetrating waterproofing compound designed to protect non-deformable mineral substrates from exposure to water. Osmotic permeation ability and high adhesion strength to the substrate provides allows obtaining a tough waterproof coating that ensures protection against positive and negative water pressure, with the best guarantee of strength and durability. SPEKTRON is resistant to chlorides and sulphates.

INTENDED USE

The compound is intended for waterproofing structures and facilities that are in short-term or constant contact with water. It is designed for both interior and exterior applications. It is used for waterproofing the following: external and internal walls of basements; industrial and waste water tanks; wells; artificial ponds; service ducts and chutes; inspection chambers and utilities wells; small pools; tunnels; elevator shafts; retaining walls; underground masonry; foundations; terraces and balconies; flat roofs.

SPECIAL FEATURES

It is recommended to use the compound as a coating for protecting concrete elements and masonry exposed to the damaging effects of moisture and weather.

SUBSTRATE

Types of substrates: concrete; solid brick; cement-based plasters and screeds, with a mechanical strength of at least 12 MPa (after 28 days).

SURFACE PREPARATION

Before applying the waterproofing compound, make sure that the substrate is sufficiently cured. The surfaces to be treated must be dry, clean, strong, solid and not subjected to deformation. The surface of the substrate must be dust-free and free from cement slurry, rust, oils, paint residues, putty, bitumen and anything else that can impede good adhesion of SPEKTRON solution to the substrate. Loose and fragile areas of the substrate must be removed mechanically, by sandblasting or waterblasting and repaired with suitable repair mortars. Cracks in the substrate must be expanded and repaired with suitable repair mortars. Pre-leveling of substrates, if necessary, should be performed at least 14 days before applying the waterproofing compound. Absorbent surfaces (cement screeds and plaster, concrete, etc.) must be moistened with clean cold water using a spray bottle or a damp sponge before using SPEKTRON. This will prevent the waterproofing solution from drying out too quickly. Any excess water should be removed from the surface with a sponge or compressed air.

SOLUTION PREPARATION

Mix 6.5 liters of water and 25 kg of SPEKTRON dry mix in a clean container. Slowly pour the powder into the water, stirring continuously with an electric drill with a mixing nozzle, until a homogeneous solution without lumps is obtained. It is not recommended to stir the solution by hand. Let the resulting solution stand for at least 5 minutes. After re-mixing, the product is ready for use.

COMPOUND APPLICATION

Apply SPEKTRON solution with a brush or smooth stainless steel trowel. Apply the material in two crossed layers, with a total thickness of at least 1.5 mm and not more than 4 mm. The second layer is applied after the first layer has dried, after about 5–6 hours, but not more than 24 hours later. Corners and fillets must be carefully processed. In the process of setting and drying of SPEKTRON solutions, it is not required to additionally moisten the waterproofed surface.

APPLICATION CONDITIONS

The works should be carried out at a substrate and ambient temperature of from +8°C to +35°C. In order to avoid scouring, the treated surface after SPEKTRON application must be protected from rain and other atmospheric precipitation for at least 48 hours. The surface to be treated must be protected from direct sunlight for at least 48 hours after SPEKTRON application. After applying SPEKTRON, the surface must be protected from frost for at least 48 hours. Do not add cement, lime, dry mixes of other manufacturers and other materials to SPEKTRON. Do not add water to SPEKTRON solution after the start of setting. Do not apply SPEKTRON on bitumen membranes, on wooden, plastic, metal, rubber, gypsum substrates, on painted surfaces. Do not apply SPEKTRON on drywall, plywood, chipboard, glass magnesium boards, cement-bonded chipboards, artificial marble, asbestos cement boards. The tools must be washed with water immediately after the end of work before the solution on them hardens, otherwise they must be cleaned mechanically.

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HEORETICAL CONSUMPTION

1.6 kg/m² per 1 mm of layer thickness.

SHELF LIFE

The guaranteed shelf life of the compound in a sealed package is 12 months from the date of manufacture.

SAFETY MEASURES

When performing the works, use personal protective equipment to protect eyes, skin and respiratory organs. In case of contact with skin or mucous membrane of the eye, rinse with plenty of water. Consult a doctor if necessary.

PHYSICAL AND MECHANICAL CHARACTERISTICS OF THE SYSTEM

Parameter name	Parameter value
Appearance	Grey powder
Particle size distribution	0-0.4 mm
Bulk density of dry mix	1.1 kg/l (1,100 kg/m³)
Toxicity	Non-toxic
Proportions to be used when preparing the compound	0.26 l of water per 1 kg 6.5 l of water per 25 kg
Maturing time of the solution	5 min
Specific weight of the solution	1.8 kg/l (1,800 kg/m³)
Lifetime at +23°C	60 min
Application temperature	From +5°C to +35°C
Adhesion strength after 28 days	> 2.0 MPa
Flexural strength after 28 days	≥ 7.5 MPa
Compressive strength after 28 days	≥ 25 MPa
Capillarity water absorption coefficient	0.0 kg (m2min0.5)
Water resistance at positive and negative water pressure after 7 days under standard conditions	5 bar
Tensile adhesion strength after freeze-thaw cycles (EN 1348)	>1.0 MPa
Possible to walk on after	24-48 hours
Possibility to apply working loads (final hardening)	In 7 days
Thermal resistance 28 days after laying	From -30°C to +90°C
Theoretical consumption	1.6 kg/m² per 1 mm of layer thickness
Minimum application thickness	1.5 mm
Maximum thickness of one layer	2.5 mm
Maximum thickness	4 mm
Shelf life and storage conditions	The shelf life of the compound in a sealed package is not more than 12 months from the date of manufacture.