

MONNELI ESPOCEM GPP

General Purpose Non-Shrink Cementitious Precast Grout

Description

ESPOCEM GPP is a general purpose cementitious non-shrink precast grout which transforms into a fluid mixture that fits to be applied in different places when mixed with water.

ESPOCEM GPP has excellent characteristics of adhesion, impermeability and chemical resistance. It has also a thermal expansion coefficient similar to high quality concrete.

Advantages

- Non-shrink
- High early strength
- No chlorides content
- Low water cement ratio to ensure minimum permeability and high durability
- Does not contain metallic aggregate
- Free flow and self compacting
- Easy to use by trowel or pouring
- Excellent bond to substrates

Uses

ESPOCEM GPP is cementitious grout supplied in dry powder. When water is added non-shrink grout is produced that can fill gap up to 20 cm. It can be used for the following:

- Grouting under base plates
- Anchoring wide range of fixing
- Floor patching
- Void filling
- Steel structure footings
- Rigid filling of prefabricated elements
- Anchoring bolts, tie bar holes, beneath machine base plates, etc.
- Fence posts
- Pile cap head treatment and waterproofing

Instructions for Use

Surface Preparation

The surface must be solid, compact, clean, free from dust, cement laitance, oil, grease, etc. All loose parts of concrete should be removed. A coarse surface profile with aggregate exposed is preferred.

Saturate the support with water several hours prior to grouting. Concrete surface should be damped (with no free water) in order to avoid possible water absorption at the moment of casting. Base plate must be clean and free from oil, grease, etc.

Formwork should be constructed to be leak proof as ESPOCEM GPP is a free flowing grout. It should also include outlets for the pre-soaking water.

Mixing

To prepare the mortar, pour into a cement mixer or into a container about 3.3 – 3.5 Liters of clean water (depending on the required consistency), add 25kg bag of ESPOCEM GPP and mix for few minutes using mixer or drill machine fitted with suitable paddle till obtaining a homogeneous mixture, free from lumps.

Do not add extra water to the mix more than what specified. If the mix starts to harden, do not use the mix, prepare a new one.

Application

The mixed grout should be poured only from one side of the formwork to eliminate the entrapment of air. This can be achieved by pouring the grout across the shortest distance. Maintain a constant hydrostatic head, preferably of at least 15 cm on the side where the grout has been poured, allow 10 cm

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clearance between the side of the form and the base plate of the machine.

ESPOCEM GPP can be placed in thicknesses up to 20 cm.

Curing

The repaired area shall be cured in accordance with good concrete curing practice and protected from drying winds. Curing shall be done with non-degradable curing compound BETOCURE AR. Alternately; a wet Hessian cloth covered with polyethylene sheet can also be employed.

Cleaning

ESPOCEM GPP should be removed from tools and equipment and mixers with clean water immediately after use. Cured material should be removed mechanically.

Recommendations

- Do not apply the product at a temperature less than +5°C. Variations of temperature may increase or reduce the initial and final setting time of the mortar
- During the peak temperature of the day in the summer season, working area should be covered if work to be executed externally
- In warm weather, store the material in cool place.
- Make sure to use cool water to keep the mixed mortar temperature below +25 °C

Technical Data

Properties	Result
Appearance	Grey powder
Density at 25 ⁰ C	2.3 kg/L
VOC	4.0 g/L
Expansion at 24 hours	Up to 1%
Compressive strength after 24 hours after 7 days after 28 days (ASTM C 579)	18 N / mm ² 40 N / mm ² 55 N / mm ²
Flexural Strength at 28 days (ASTM C 580)	8.0 N / mm ²
Initial Setting Time	1.5 - 2 hours
Final Setting Time	3 - 3.5 hours

All values are subject to 5-10 % tolerance

Applicable Standards

- ASTM C 109, 827 & 1107
- BS 1881, BS 4551 & BS 6319
- UNI 8147

Yield

12.4 Liters per 25kg bags

Packaging

ESPOCEM GPP is supplied in 25kg bags

Storage

Keep the product in dry and sheltered place. In these conditions, product shelf life is 12 months from the date of production.

Health & Safety

ESPOCEM GPP is a cement-based product. During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment if necessary. In case of contact with skin, rinse with water and again wash thoroughly with soap and water. In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly. If ingested, obtain medical attention immediately. Do not induce vomiting.

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