# NSF 611

## Self-leveling floor screed 1-4 cm




The NSF 611 product is a one component, cement based, self-leveling mortar suitable for floor facing and normalization. It consists of cement, quartz sand of chosen granulometry with 3.5mm maximum grain size and special additives. It is applied at a thickness up to 1-4 cm, It is produced and controlled according to the EN 13813 European standard.

**Advantages:**

- It is produced with quartz sand
- It is self levelling
- Easy and rapid application
- Rapid development of compressive and bending strengths
- Strong adhesion on concrete
- It does not present shrinkage or crevices
- Smooth surface with superior hardness
- Resistance to humidity and vapors
- Resistance to ageing
- Resistance to oils and solvents
- Certified with CE according to the EN 13813 European standard

CT-C30-F5

EN 13813

EPD INTERNATIONAL EPD SYSTEM

## TECHNICAL CHARACTERISTICS

**Packaging:**

Paper valve bag 25 kg

**Application:**

Suitable for floor construction in indoor and outdoor areas.

**Shades:**

Grey

**Storage:**

It is stored on wooden palettes and in a dry environment with temperature above 0ºC for 6 months from the production date.

**Tool cleaning:**

With water immediately after use.

**Consumption:**

~ 18 kg of dry mortar per 1 $m^2$ for 1 cm layer thickness.

## FIELDS OF APPLICATION

The product is suitable for:

- construction of self-leveling floors with thickness from 1 to 4 cm.
- filling and leveling of cavities
- evening and repair of defects in existing floors
- floor penetration in order to install wall-to-wall carpeting, tiles, plastic or wooden floors glued or not.

It can also be left completely uncovered or painted. It presents optimum workability and it levels itself, providing a smooth and hard surface.

## SUBSTRATE PREPARATION

The substrate must be dry, firm, stable, free from frail materials, dust, colors, wax, oils. Before the application the substrate must be washed well with water and after it dries it must be primed with the GLX 290 acrylic primer, diluted at ratio 3 parts water: 1 part primer. The absorbent as well as the old surfaces are stabilized using the same primer. Apply the product after the complete drying of the primer (approximately 2-6 hours). The primer consumption (diluted in water) is 350-400 g/m$^2$. You must take into consideration that the material is self-levelling, so if there are any inclinations on the substrate, they shall be covered by the product until a level and horizontal floor is created. Therefore, wherever there are great inclinations and great amount of the material (more than 1 cm) are anticipated it would be better to pre-fill with the NSF 611 material.

## METHODS OF PREPARATION

### Preparation with a continuous mixing machine

Fill the machine's container with the product and adjust the water flow rate, in order to produce a mass with low viscosity that is easy to spread.

### Material preparation by hand

In a clean container add 6.3 lt of clean water for the 25 Kg bag and gradually empty the content of the bag of the product while continuously mixing with an electrical agitator, in order to produce a homogenous mortar mass. Allow the mixture to mature for 5 minutes and agitate again for a little. The mixture is ready to use within the next 2 hours. After the preparation of the mixture do not add extra water to correct the mortar's workability. This shall lead to a decrease of resistances and to the increase of its shrinkage.

## APPLICATION

The prepared product is cast and assisted with a wide toothed metal trowel in order to cover the desired area. While the floor is still fluid, treat the surface with a special radial roller, so as to release any entrapped air. In this way it will prevent the joints between the different layers, and result in a uniform and leveled surface. It is recommended the use of plaster beds in order to achieve uniform thickness. To avoid crack formation on the substrate it is recommended the use dilatation joints. If the weather conditions cause abrupt drying of the product, such as high temperatures product protection is required until the completion of setting. Allow the product to completely dry before the next application. The duration will depend on the climatic conditions. During the application and during the following 24 hours the temperature of the environment and the substrate must be between +5$^o$C and +35$^o$C.

## NOT RECOMMENDED

The application of the product is not allowed:

- Where great friction strength is required (industrial applications)
- When there is a frost forecast for the 24 hours following the application.
- Under wet conditions (like rain).
- On places directly exposed to intense solar radiation or on warm substrates.

The application at great thickness (more than 1 cm) must be avoided due to the risk creating crevices. In such a case it would be preferred to apply the material in two or more layers, casting each layer only after the previous one has dried. Additionally, the floor surface should be carved at 2.5-3 m distances.

## PRECAUTIONS

The NSF 611 product contains cement and reacts with water, producing an alkaline solution. For this reason, protect your eyes and skin. In case of contact rinse with plenty of water. In case of contact with eyes seek medical advice immediately. Read the information on the label and in the Technical Leaflet of the product before use. Wear appropriate protective clothing and gloves. The product's Safety Sheet is available to professionals upon request.

| Technical characteristics | Units | Standard | Value |
|---|---|---|---|
| Appearance | | | dry powder |
| Color | | | grey |
| Thickness of application | mm/layer | | 1-4 |
| Resistance temperature | $^{o}C$ | | -30 to +90 |
| Reaction to fire | % organic | | ≤1.0 |
| Maximum grain size | mm | | 3.5 |
| Dry bulk density | kg/l | EN 1015-6 | 1.4 |
| Bulk density of fresh mortar | kg/l | | 2.0 |
| Flow test (cylinder 3x5cm) | cm | | 12.5 |
| Compressive strength | $N/mm^2$ | EN 1015-11 | ≥30 |
| Flexural strength | $N/mm^2$ | EN 1015-11 | ≥5 |
| Setting time | min | EN 196-3 | 170-220 |
| Strength development time | h | | 12 |
| Shrinkage (16x4x1cm moulds) | mm | | 0.039 |
| Walkability | h | | 3 |
| Consumption | $kg/m^2$ per cm | | 18 |

*Note: The measurements were taken in laboratory environment under a temperature of +23$^{0}$C, Relative humidity 50% and without ventilation. It is possible for them to vary depending on the conditions prevailing at the worksite, such as temperature, humidity, ventilation, absorbability of the substrate.
The technical information and instructions contained in the present brochure and referring to the application and end use of Thrakon products are based on the up to now know-how and experience of the Company with regards to the products and are provided in good faith as long as such products are stored, used and applied as per Thrakon recommendations. Due to the inability, on our part, to directly inspect the conditions prevailing at the worksite as well as the application procedures of the product, the Company does not provide any guarantee with regards to the adequacy of its products for specific purpose while the Company shall not bear any legal responsibility based on the information stated in the present brochure or any other written, oral, or otherwise provided recommendations and instructions. The users of the products are advised to perform a limited surface testing of the products adequacy for the eventual application and use intentions. Thrakon reserves the right to modify the features of its products without prior notification. All orders shall be approved only following acceptance of the above and under the eventual Commercial Policy terms of the Company. The issuance of the present brochure voids any prior version.
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