

## DANOLOSA NOx

Photocatalytic outdoor concrete tiles designed with an insulating XPS layer to regulate the temperature of the surface.



ETE 18/ 0328

DANOLOSA NOx is a type of tile used for outdoor terraces or balconies that includes an insulating layer to help regulate the temperature of the surface. Insulated terrace tiles help to prevent heat loss and regulate the temperature of the terrace surface, which can be particularly important in colder climates or for homes that require energy-efficient solutions. They can also help to reduce noise transmission and provide pleasing aesthetics. This product contains photocatalytic properties. When the surface is exposed to sunlight, the photocatalyst reacts with pollutants in the air, such as nitrogen oxides or volatile organic compounds (VOCs), and breaks them down into harmless compounds like water and carbon dioxide. Overall, insulated terrace tiles can provide a durable and practical solution for outdoor living spaces, with the added benefit of energy efficiency and thermal insulation.

### Presentation

- Length (cm): 50
- Width (cm): 50
- Thickness (mm): 85
- Colour: White
- Product code: 711013

### Technical Data

Concept	Value	Standard
Compressive strength of concrete 28 days (concentrated load on Ø 20 cm) (kN)	>30	-
Bending Tensile Strength (kN)	>3,5	-
Compression behavior at 25% ( $\geq$ MPa)	0.31	UNE-EN 1339
Compression behavior at 5%	0.3	UNE-EN 1339

Concept	Value	Standard
External fire behaviour	Broof(t1)	UNE-EN 1339
Compression strength (kPa)	300	-
Point load strength to 250 N	Sin defectos	DIT 550/10; DIT 551/10
Resistance to 10 J impact (Ø mm)	<13	DIT 550/10; DIT 551/10

## Additional Technical Data

Insulation thickness (mm) 50 ( $\pm 1$ ) - Thickness of concrete (mm) 33(+/- 3) UNE-EN 1339 Dimensional Stability XPS  $\leq 5$  - Mass (kg) 15  $\pm 1$  - Porosity interconnected pores (%) > 20 - Insulation thickness (mm) 50 ( $\pm 1$ ) - Thickness of concrete (mm) 33(+/- 3) UNE-EN 1339 Dimensional Stability XPS  $\leq 5$  - Mass (kg) 15  $\pm 1$  - Porosity interconnected pores (%) > 20 - Reaction to fire insulation (Euroclass) E UNE-EN 13501-1 Fire performance of concrete (Euroclass) A - Compressive strength of concrete 3 days (MPa) 9,4 UNE-EN 12390-3: 2009 Compressive strength of concrete 21 days ( $\geq$  MPa) 11.6 UNE-EN 12390-3: 2009 Compressive strength of concrete 28 days (MPa) 12.5 UNE-EN 12390-3: 2009 Concrete flexural strength (MPa) 1,3 $\geq$  1,3 UNE-EN 1339

## Environmental Information

Concept	Value	Standard
Solar reflectance index (SRI)	40,3 $\pm$ 11,1 (valor para coeficiente convección medio)	ASTM E1980-11
Rendimiento en la purificación fotocatalítica de óxidos de nitrógeno (%)	>8 (Clase 3)	UNE 127197-1
Manufactured in	Fontanar - Guadalajara (España)	-

## Standards and Certification

- DIT 550R/16 "ESTERDAN PENDIENTE ZERO".
- DIT 550R/20 "DANOPOL PENDIENTE ZERO"
- Material contemplated in the CTE and CEC.
- ETA 18/0328 "DANOLOSA".

## Scope

- Technical roofs on supports (plots).
- Insulating and filtering slab for visitable flat roofs.
- Technical walkways on non-accessible roofs finished in gravel.
- Renovation and transformation of non-accessible roofs.
- Support surface for equipment on non-trafficable roofs and installations in general.
- Sterile zones of green flat roofs.
- New construction and refurbishment.

## Advantages & Benefits

- Results in a lighter-weighting roof compared to other types of heavy protections.
- High resistance to compression, allowing foot traffic.
- Adds thermal insulation and walkable paving to the roof.
- Good filtering capacity, allows installation and transit in adverse weather conditions.
- Paving joints are not needed thanks to the 1-2 mm “reduction” of the porous concrete layer with respect to the XPS insulating base.
- Allows for the placement of benches and supports to place equipment and facilities.
- Protects waterproofing.
- Photocatalytic purification of NOx gases > 8% (Class 3).
- It can be disassembled, facilitating access to the waterproofing.
- Simple installation.

## Instruction for Use

### Preparation of the support:

Once the waterproofing is done, the roof should be smooth, uniform and clean. **Danolosa application:**

- It is applied without any gripping material, deposited with care, preferably over a geotextile antipunching layer covering the waterproofing, lying on the insulation face.
- Slabs will be placed without any expansion joint.
- On hipper ends and valleys the slab should be accordingly cut using a water-cooled low r.p.m. radial machine.
- A small space (3-5 mm) must exist, to allow dilatations coming from, for example, skylights, etc...
- It should be carried on pallets.
  - Not considered as dangerous goods for transport.

## Indications and Important Recommendations

- A separating layer type DANOFELT® PY 300 must be placed between the PVC waterproofing and the tiles.
- It is not necessary to use filler in the joints.
- Do not use hammers to fit or level the parts.
- Its use on plots is restricted to supports with a square head of at least 200 mm.
- For the cutting of the DANOLOSA, it is recommended to use a water-cooled low r.p.m. radial machine, type DU-200-L.
- The apparition of portlantita efflorescences on porous concrete, characterized by changing the colour of the tile, does not mean the decline of its performance.
- Variations in tone in the raw materials of porous concrete may also vary the tone between tiles of the same colour.

## Handling, storage and preservation

- The cutting machines must be in a ventilated room.
- Keep away from flames and sources of heat.
- Keep in ventilated areas, preferably in premises with fire prevention systems, as remnants of ethanol (traces) may be released in the production process.
- Goods not considered hazardous.
- It must be transported on pallets.

## Notice

- The information contained in this document and any other advice provided, are given in good faith, based on DANOSA's current knowledge and experience when products are properly stored, handled and applied, in normal situations and in accordance with the recommendations of DANOSA. The information applies only to the application (s) and the product (s) to which reference is expressly made. In case of changes in the parameters of the application, or in case of a different application, consult the DANOSA Technical Service before using the DANOSA products. The information contained herein does not exonerate the responsibility of the building agents to test the products for the application and intended use, as well as their correct application in accordance with current legal regulations. The product images used in our communications are indicative and may differ slightly in color and aesthetic appearance in relation to the final product. Orders are accepted in accordance with the terms of our current General Sales Conditions. DANOSA reserves the right to modify, without prior notice, the data reflected in this documentation. Website: **[www.danosa.com](http://www.danosa.com)** E-mail: **[info@danosa.com](mailto:info@danosa.com)** Telephone: **+34 949 88 82 10**