

OUTDOOR FLOOR NOVOFLOOR ICE SYSTEM

The NOVOFLOOR ICE outdoor floor is a system consisting of a special refrigeration mat made of a high quality EPDM mix and filling layers made of a mixture of granulated EPDM and a polyurethane coating. NOVOFLOOR ICE is a bi-functional system. The special structure of the floor allows building ice rinks on top of it, or to use the floor in outdoor sports facilities for team games, e.g. basketball or volleyball, or to use the floor for tennis court surfacing, etc.

The advantages of the floor are: high elasticity, superior damping of impact energy, high coefficient of friction, aesthetic appearance, and seamless design.

The outdoor floor is based on polyurethane resins which are highly resistant to changing weather conditions, including low temperatures.

Procedure:

Before building the NOVOFLOOR ICE floor, leak test the refrigeration system (mats) with compressed air at a test pressure of 2.5 bar. The refrigeration mats are bonded with the substrate with the NOVOFLOOR P21 adhesive which is applied with the A2 format trowel (depending on the substrate roughness, the consumption may vary from 0.8 to 1.0 kg/m²). Keep the refrigeration mat under a constant test pressure of 2.0 bar minimum during the following work stages. The special refrigeration mat, made of a high-quality EPDM mix, must be degreased first with NOVOFLOOR R01 consumed at approx. 100 g/m². Leave for approx. 30 minutes and proceed with the next stage: refrigeration mat impregnation. Impregnate twice with NOVOFLOOR R02. Use brushes with the bristle cut in half or hard bristle brushes to ensure that the mat is sufficiently penetrated by the impregnant. The consumption should be approx. 300 g/m² per impregnation cycle.

Wait 2 to 3 hours maximum between the impregnation cycles.

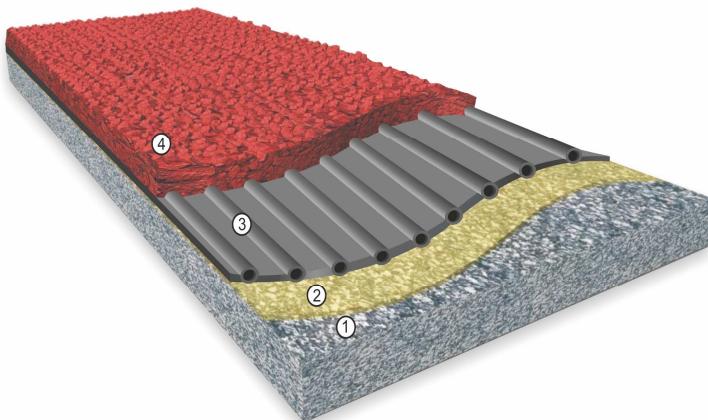
The next stage is to apply the NOVOFLOOR P44 polyurethane coating with a B2 trowel, followed by filling with the granulated EPDM at a grain size of 1.0-3.5 mm. The recommended consumption of NOVOFLOOR P44 is 4.4 kg/m²; the consumption of the granulated EPDM is approx. 6.5 kg/m² per backfill (with approx. 4.4 kg/m² remaining embedded in the system; collect (sweep away) the excess before pouring the next layer). Apply NOVOFLOOR P44 12 hours after impregnation, otherwise the impregnation must be repeated with NOVOFLOOR R02 according to the directions above.

The second - service - layer of the system is the NOVOFLOOR P44 coating applied with the B4 trowel and backfilled with the granulated EPDM at a grain size of 1.0-3.5 mm. The recommended coating yield is 3 kg/m², the consumption of the granulated EPDM is approx. 5.5 kg/m² per backfill (with approx. 3.4 kg/m² remaining embedded in the system; collect (sweep away) the loose excess).

The figure below shows the typical layer arrangement of the NOVOFLOOR ICE floor.

- 1 - NOVOFLOOR P10 sealer (for concrete substrates) or NOVOFLOOR P11A sealer (for asphalt substrates)
- 2 - NOVOFLOOR P21 adhesive
- 3 - special refrigeration mat made of a high quality EPDM mix
- 4 - NOVOFLOOR P44 coating + granulated EPDM

Horizontal signage: NOVOFLOOR P68



NOVOFLOOR ICE can be built on two substrate types:

- 1 – concrete, sealed with NOVOFLOOR P10 (see Technical Data Sheet PT-4-01);
- 2 – asphalt, sealed with NOVOFLOOR P11A (see Technical Data Sheet PT-4-01);

The overall thickness of the NOVOFLOOR ICE floor is 18 ± 1 mm.

The table below lists the estimated consumption of individual components.

LAYER	COMPOSITION	CONSUMPTION [kg/m ²]
Sealer (*)	NOVOFLOOR P10 or NOVOFLOOR P11A	0.2 - 0.3
Adhesive bonding of the mat with the substrate	NOVOFLOOR P21 (A2 trowel)	0.8 - 1.0
Degreasing	NOVOFLOOR R01	Ca. 0.1
Impregnation (double)	NOVOFLOOR R02	2x approx. 0.3
Filling layer	- NOVOFLOOR P44 (B2 trowel) - granulated EPDM, (1.0 - 3.5 mm)	4.4 4.4
Top service layer	- NOVOFLOOR P44 (B4 trowel) - granulated EPDM, (1.0 - 3.5 mm)	3.0 3.4

(*) as applicable to the substrate type

Use and maintenance:

See Technical Data Sheet PT-4-02 and Technical Data Sheet PT-4-03

CAUTION: The NOVOFLOOR ICE has a limited puncture strength due to the special refrigeration mat being a component of the system.

Do not use shoes with spikes.

System freezing:

Once the system has been primed with the refrigerant (glycol solution), completely bleed all air from the system and set the glycol solution static pressure in the system at 0.8 bar maximum.

Once the refrigerating unit has been started, keep the dynamic pressure in the system at 2.5 bar maximum. When the floor has been chilled (the glycol return temperature is between -3°C and -5°C), start building the ice layer. Build the ice in layers by spraying water up to the desired thickness, i.e. approx. 5 cm.

Other information:

The effectiveness of our systems is the result of lab research and many years of experience. The data contained here meets the current knowledge about our products and their application potential. We guarantee high quality provided that our recommendations are observed and the works are carried out according to good craftsmanship practice. It is necessary to do a test application of the product due to its potentially different reaction with different materials. We may not be held liable for defects if the final results are affected by factors beyond our control.