

# KARDO WATERPANEL X

\* \* \* radiant heating & cooling without screed \* \* \*

## TECHNICAL DOCUMENTATION

### Product description:

**KARDO Waterpanel X** is a system which consists of two Insulation Boards with an XPS core with grooves for underfloor heating pipes installation.

**KARDO Waterpanel X<sub>s</sub>** – Central Board

**KARDO Waterpanel X<sub>b</sub>** – Edge Board

### Application:

**KARDO Waterpanel X** is an Insulation Board designed to be used as an insulation material for water radiant heating/cooling (floor, wall or ceiling). It's designed to not require screed but adhesive with the glass fibre mesh which will be placed on the surface of the insulation board means that tiles or other type of coverings can be laid straight on top.

### Product features:

**KARDO Waterpanel X** is an exceptionally durable and easy to cut Insulation Board. This system can be installed in damp areas and has superb insulation properties. This system facilitates an increase in heating efficiency (the warm-up time is shorter) and decrease the running cost.

### Preparing the base:

The building base must be load-bearing, stable, levelled and dust and grease free. Old layers of oil and paints must be removed.

### Installation:

The first step is to lay PE foil 0.2 mm thickness and the along the wall partitions of a room with an edge band or styrofoam/ wool. Next lay **KARDO Waterpanel X** boards and standard XPS boards on the areas which won't require the radiant heating system. If the floor or wall need insulation boards which are thicker than 30 mm, then a layer of standard XPS is required to be laid underneath this system. Install the pipes by pressing them into the 16 mm diameter grooves. It is recommended to form coils into a meander-like shape which is efficient for up to 80 m of the pipe on one heating installation. If is need to use longer pipes it is possible to create the next heating installation with pipe up to 80 m. The pipes are connected to distributors and a pumping set for surface heating. The insulation boards must be staggered and seal with KARDO Waterpanel flex adhesive. A fibre glass mesh with a minimum weigh of 320 g/m<sup>2</sup> should then placed onto and sunk into this adhesive. The fibre mesh should be invisible and completely covered by this adhesive. The thickness of adhesive should be 3 - 5 mm. Floor finishes like tiles, or other floor (wall) materials can then be laid directly on top. KARDO Flex adhesive is recommended for installation, as written on the pack. Please consult KARDO Insulation before using another brand of adhesive.

### Approvals:

Declaration of Performance for XPS Insulation Boards.

### Dimensions:

Length x Width:.....1250 x 600 mm (+/-10 mm)

Thickness:.....30 mm (+/-2 mm)

Distance between grooves:..... 100 mm (+/-2 mm)

### Technical data:

Weight:.....0.68 kg/unit (+/- 10%)

Thermal conductivity:.....< 0.034 W/mK

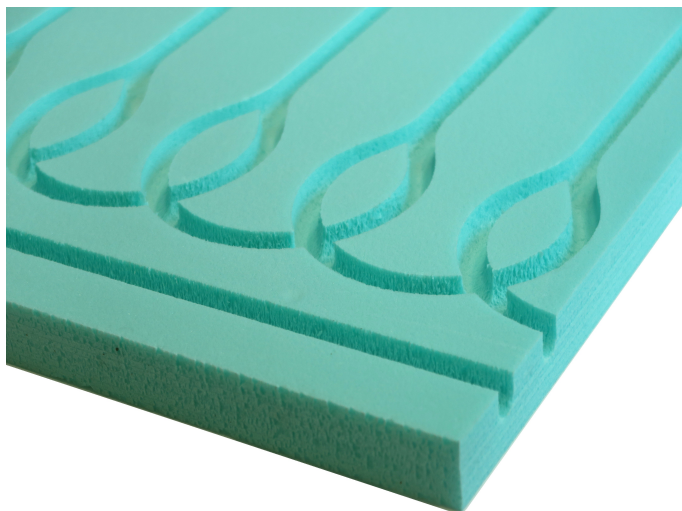
Water absorption (24h):.....< 0.1%

Density:.....> 34 kg/m<sup>3</sup>

Compressive strength at 10% deflection:.....> 300 kPa

Reaction to fire:.....Euro class E

Working temperature:.....- 50°C to +70°C



**KARDO Waterpanel X**  
Edge Board (Waterpanel X<sub>b</sub>)  
Central Board (Waterpanel X<sub>s</sub>)

## DISTRIBUTOR:

