Technical data sheet

wedi Vapor 85

- For rooms with high levels of humidity
- Waterproofing, vapour barrier and thermal insulation

General product description

wedi Vapor 85 is made from blue extruded polystyrene hard foam (XPS) which is reinforced with alkali-resistant fibreglass mesh and coated with polymer-modified mortar on both sides, as well as a vapour membrane barrier on one side.

Applications

wedi Vapor 85 is both a panel type sealing system and a building board with constructional and vapour resistant properties which is specifically tested and approved for wall applications. It is used on solid walls and stud frames as well as on floors. Due to its special properties, it is versatile in its applications:

- Carrier element for laying tile, slab and natural stone floor coverings using the thin-bed method, and surface for plaster and other materials
- Vapour barrier
- Effective thermal insulation
- Compound seal with tile and slab coverings on wall surfaces

Surface requirements, laying

When using wedi Vapor 85 in steam rooms, the laying of ceramic tiles on wedi Vapor 85 should ideally be done with reaction resin adhesives in accordance with DIN EN 12004-1. Ceiling applications must also be mechanically secured in accordance with the wedi application guidelines by means of suitable screws and wedi washers in the load-bearing ceiling/substructure.

For instructions on processing, execution of sealing details and substrate requirements, refer to the application guidelines and installation instructions for wedi Vapor 85.

Technical properties of wedi Vapor 85

Composite element made of extruded polystyrene rigid foam reinforced on both sides with a special cement coating and with a vapour membrane barrier on one side.

Thickness	12,5 mm; 20 mm
Vapour barrier (polyethylene foil with special fleece layer)	0,51 mm
Water vapour diffusion equivalent air layer thickness Sd value	92 m
Resistance to water vapour diffusion (μ) DIN EN 1931 (sheet material vapour barrier)	170.000
Water vapour diffusion flow resistance Z value (sheet material vapour barrier)	555,64 GPa • m² • s/kg 1,54 • 10^9 m² • s/kg
Water vapour diffusion flow resistance (sheet material vapour barrier)	4.065.287 s/m
Max. weights* of surface coverings in wet rooms/bathrooms/steam rooms	
Wall	max. 50 kg/m²
Ceiling	max. 30 kg/m²
Fire behaviour EN 13501, building material class	E
Adhesive tensile strength	0,27 N/mm²
Linear coefficient of thermal expansion	0,02 mm/mK

Nominal thickness in mm	Thermal conductivity λ in W/(m • K)	Heat transfer resistance R in m² • K/W
12,5	0,036	0,35
20	0,036	0,56

* The surface weight describes the total weight per m², consisting of the finished surface (eg. ceramic tile) as well asadhesive and grout.

Technical properties of raw foam building board systems

CO^2-foamed, extruded polystyrene rigid foam with closed cell structure and flame-retardant additive. The polystyrene rigid foam is HCFC and CFC-free.

Long-term compressive strength (50 years) ≤ 2% compression EN 1606	0,08 N/mm²
Compressive resistance or compressive strength at 10% compression EN 826	0,25 N/mm²
Associated module of elasticity EN 826	10-18 N/mm²
Thermal conductivity EN 13164	0,036 W/mK
Tensile strength EN 1607	0,45 N/mm²
Shearing resistance EN 12090	0,2 N/mm²
Shear modulus EN 12090	7 N/mm²
Bulk density EN 1602	32 kg/m³
Resistance to water vapour diffusion (μ) EN 12086	100
Water absorption under long-term immersion EN 12087	≤ 1,5 % by vol.
Capillary action	0
Linear coefficient of thermal expansion	0,07 mm/mK
Temperature limits	-50°C / +75°C
Fire behaviour EN 13501	E
Carbon dioxide propellant GWP value	1

Packing

Boards on pallets

Storage

wedi Vapor 85 should always be stored flat, irrespective of its thickness. It must be protected against direct sunlight and moisture.