FIBRAN*xps* **500-L**

DESCRIPTION:

FIBRANxps 500-L is a thermal insulation board made of extruded polystyrene, having a smooth surface and shiplap edges to prevent the formation of thermal bridges.

APPLICATION:

Thermal insulation gives unconditional protection in humid environment and/or under extremely heavy mechanical load.

- Thermal protection of heavily loaded industrial floorings
- Thermal protection of heavily loaded and drivable flat roofs
- Thermal protection of roads in the swamp terrain (to prevent frost heaving)
- Thermal protection under sensitive civil engineering constructions
- Thermal protection of cold room floors

QUALITY:

Products are tested in accordance with:

- EN 13164,
- EN 13501-1,
- EN ISO 11925-2:2002.

at the following notified laboratories and institutes: ZAG Ljubljana, FIW München, DIBt Berlin, IFBP Hannover, IMS Belgrade, IMK Sarajevo.

System of assessment and verification of constancy of performance of the construction product AVCP – System 3

ENVIRONMENT PROTECTION:

- Products FIBRANxps are produced with environmentally friendly blowing agents
- Hydrofluorocarbons free - HFC free
- Hexabromocyclododecane free – HBCD free
- Global Warming Potential GWP < 5
- Ozone Depletion potential ODP = 0
- 100% recyclable

TECHNICAL CHARACTERISTICS:

XPS - EN 13164 - T1 - CS(10\Y)(1) - CC(2/1,5/50)(2) - DS(70,90) - DLT(2)5 - TR400 - WL(T)0,7 - WD(V)(3) – FTCD1 - MU50

thickness [mm]	boards in a package [pieces]	quantity in a package [m^2]	thermal conductivity λ_D [W/mK]	thermal resistance R_D [m^2K/W]	(1) compressive strength at 10% deformation CS(10\Y) [kPa]	(2) compressive creep CC(2/1,5/50) [kPa]	(3) long-term water absorption by diffusion WD(V) [vol. %]
50	8	6,00	0,033	1,50	500	180	2
60	7	5,25	0,033	1,85	500	180	2
80	5	3,75	0,034	2,30	500	180	1
100	4	3,00	0,035	2,85	500	180	1
120	3	2,25	0,035	3,40	500	180	1
140	3	2,25	0,036	3,85	500	180	1
160	2	1,50	0,036	4,40	500	180	1
180	2	1,50	0,037	4,85	500	180	1
200	2	1,50	0,037	5,40	500	180	1

- modulus of elasticity E: **30 MPa**
- fire classification: **E**
- temperature of use: **from -50°C to +75°C**
- coefficient of linear thermal expansion α: **0,075 mm/mK**
- board dimension (width x length): **600 x 1250 mm**

Approvals (ETA, aBG):

- ETA-17/0910
- Z-23.31-1805
- Z-23.33-1806
- Z-23.34-1807

DESIGNATION CODE under EN 13164:

XPS	–	abbreviation for EXTRUDED POLYSTYRENE
EN 13164	–	number of the European standard for extruded polystyrene thermal insulation material
Ti	–	declared class for thickness tolerance
CS(10\Y)	–	declared level for compressive strength at 10% deformation
TR	–	declared level for tensile strength perpendicular to the surface
DS(70,90)	–	declared value for dimensional stability under specified temperature and humidity
DLT(i)5	–	declared level of deformation under specified compressive load and temperature conditions
WL(T)i	–	declared level for long-term water absorption by total immersion
WD(V)i	–	declared level for water absorption by diffusion
MUi	–	declared level for water vapor diffusion resistance factor
FTCDi	–	declared level for freeze thaw resistance
CC ($i_1/i_2/y)\sigma_C$	–	Compressive creep over 50 years at < 2% deformation

Novo mesto, November 2024

INSTRUCTIONS FOR USE

MANAGEMENT AND STORAGE

FIBRANxps panels are resistant to cold weather, rain and snow, but not to long-term exposure to ultraviolet radiation from direct exposure to sunlight. Therefore the packaging must only be removed immediately prior to application of the material. In the event that the packaging is torn, the material must be protected from direct sunlight. Although FIBRANxps panels are among the most durable materials on the market, contact with sharp objects can destroy or warp their surface. FIBRANxps panels can be used up to a temperature of 75°C. However, if stored outdoors and exposed to direct sunlight, or covered with dark-coloured material, they may deform due to high temperatures. FIBRANxps panels must not come into contact with organic solvents such as acetone, petrol or tar. If the panels are to be cleaned, a test of the material's tolerance is recommended. Please consult our technical department, if necessary. They are generally resistant to soap and detergents, but not to bleach. FIBRANxps panels are partially resistant to substances such as vegetable oils and fats, paraffin, phenol, which means that long-term exposure to such substances can affect the appearance or structure of their surface. FIBRANxps panels are particularly resistant to water-soluble asphalt materials, lime, cement, lime mortar, seawater, as well as thin dilute acids and silicones. A preliminary test is recommended in case of doubt.

INSTALATION

All construction requirements should be taken into account during the application of FIBRANxps panels. FIBRANxps panels should be placed on flat and clean surfaces. They can easily be cut using a sharp knife or heated wire. Most FIBRANxps product edges are »L«- or »D«-shaped. The panels are usually installed in a single layer. The application of a double layer is desirable for »I«-shaped panels, to avoid the consequent formation of thermal bridges at the joins. Thermal insulation in the inverted roof application should be installed in a single layer. No naked flames should be used during the installation of FIBRANxps extruded polystyrene panels. Whenever FIBRANxps panels are to be applied over waterproofing film on basement walls, adhesive tape should also be used. In the event of basements with a high water table, the damp proofing product (e.g. tar) should be applied to the entire wall surface. When using FIBRANxps on larger surfaces, especially on warm flat roofs, the dilation or contraction of the panels due to temperature must be taken into account. The construction of expansion joins with stonewool is recommended in such cases. Please note: The cross sections and compositions of construction details presented in the leaflet are indicative and should be adapted wherever necessary.

PROTECTION AND DURATION OF APPLICATION

It is recommended that applicators of FIBRANxps extruded polystyrene boards should apply all necessary self-protection measures when cutting with heated wire.