

RAVATHERM XPS 300 ST CLOSED-CELL POLYSTYRENE FOAM INSULATION

DESCRIPTION

Long term high performance closed-cell, extruded polystyrene foam thermal insulation for new buildings and for building renovation.

APPLICATIONS

For thermal insulation of

- **PITCHED-ROOFS** - outside insulation above rafters or reinforced concrete, complementary insulation from inside or from outside (at new buildings and renovation too)
- **AGRICULTURAL AND SMALL INDUSTRIAL BUILDINGS** – inside (ceiling) insulation
- **PERIMETER** – cellar walls, frost protection, foundation

TECHNICAL PARAMETERS

Thermal conductivity and thermal resistance parameters

d_N (mm)	40	50	60	80	100	120
λ_d (W/mK)	0,033					
R_d (m ² K/W)	1,20	1,50	1,80	2,40	3,00	3,60

Parameter	Performance	
Dimensional tolerances	T	T1
Compressive strength	CS(10\Y)	300 (kPa)
Tensile strength perpendicular to faces	TR	NPD
Reaction to fire	RtF	E
Long term water absorption by total immersion	WL(T)	0,7 (\leq 0,7 Vol.%)
Long term water absorption by diffusion	40 mm	3 (\leq 3 Vol.%)
	50 – 60 mm	2 (\leq 2 Vol.%)
	80 – 120 mm	1 (\leq 1 Vol.%)
Durability of compressive strength against (compressive creep)	CC (2/1,5/50)	130 (kPa)
Durability of thermal resistance against heat, weathering, ageing/degradation		
Freeze/thaw resistance after long term water absorption by diffusion	FTCD	1 (\leq 1 Vol.%)
Freeze/thaw resistance after long term water absorption by total immersion	FTCI	NPD
Dimensional stability under specified temperature and humidity conditions	DS	(70,90)
Deformation under specified compressive load and temperature conditions	DLT	(2) 5
Ratio of closed cells	\geq 95%	
Surface	Skin	
Board size - length x width (mm)	2400x600	

NPD - No Performance Determined

FINISHING OF THE EDGES



EN DESIGNATION CODE

40 mm XPS - EN13164 - T1 - CS(10\Y)300 - CC(2/1,5/50)130 - DS(70,90) - DLT(2)5 - WD(V)3 - WL(T)0,7 - FTCD1
 50 mm - 60 mm XPS - EN13164 - T1 - CS(10\Y)300 - CC(2/1,5/50)130 - DS(70,90) - DLT(2)5 - WD(V)2 - WL(T)0,7 - FTCD1
 80 mm – 120 mm XPS - EN13164 - T1 - CS(10\Y)300 - CC(2/1,5/50)130 - DS(70,90) - DLT(2)5 - WD(V)1 - WL(T)0,7 - FTCD1

STORAGE INFORMATION

RAVATHERM XPS boards should be stored inside, preferably in their original packaging. The boards should not be exposed to other ignition sources. Exposed to intense sunlight over prolonged periods, the surface of the boards degrades into fine dust.



INSTALLATION

RAVATHERM XPS products should be applied within the recommended temperature range. When exposed to higher temperature than the recommended max. 75 °C, the boards can either soften, undergo irreversible dimensional changes and eventually melt or become brittle and lose its mechanical properties. At installation the handling and protection of the boards must follow the national building regulations. RAVATHERM XPS boards can be cut using knife, fine teeth saw, hot wire equipment, etc.

RAVATHERM XPS boards are resistant to most commonly occurring construction materials like solvent-free bituminous compounds, water-based wood preservatives, lime, cement, plaster, anhydrous gypsum as well as alcohols, acids and alkalis. Certain organic materials like solvent based wood preservatives, coal tar and derivatives (aerosol etc.), paint thinners and common solvents such as acetone, ethyl acetate, petrol toluene, white spirit can attack the XPS boards resulting in softening, shrinkage and even dissolving with the consequent loss of performance.

When bonding RAVATHERM XPS boards, the use of solvent free adhesive is recommended.

Compatibility with polystyrene foam should be sought from the adhesive manufacturer prior to application.

ADVANTAGES OF RAVATHERM PRODUCTS

- HIGH, LONG LASTING THERMAL INSULATION PERFORMANCE
- EXCELLENT MECHANICAL STRENGTH AND HIGH DURABILITY
- HIGH LOAD BEARING CAPACITY
- WATER RESISTANCE, RESISTANCE TO FREEZE-THAW CYCLES
- RESISTANT TO AGING, ROT AND DETERIORATION
- SELF-EXTINGUISHING IN CASE OF FIRE
- LIGHTWEIGHT AND EASY TO HANDLE
- EASY TO CUT WITH SIMPLE TOOLS
- CLEAN, ODOURLESS AND NON-IRRITANT TO SKIN



GENERAL INFORMATION

RAVATHERM XPS products comply with the requirements of the EU Regulation on ozone layer depleting substances. RAVATHERM boards contain a flame retardant additive to inhibit accidental ignition from a small fire source. The boards are, however combustible and, if exposed to an intensive fire, may burn rapidly. All fire classifications given in RAVATHERM literature are based on small scale tests and may not reflect the reaction of the material under actual fire conditions. The national building regulations set out the requirements for the fire performance of constructions.

RAVATHERM XPS products are not bio-degradable in the environment and do not present an environmental hazard in the water/soil compartment. The boards may be disposed in approved landfills or, preferably by incineration under approved conditions. The products can be recycled, but it should not be mixed with other plastics.

MANUFACTURER

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Note:

The information contained in this document has been provided in good faith, but do not substitute for the structural plans and responsibility of designer and constructor. These do not create any warranty liability against the manufacturer. The features of the products mentioned may vary. It is the purchaser's responsibility to determine whether these products are suitable for the application desired and to ensure that the site of work and method of application conform with current legislation. No licence is hereby granted for the use of patents or other industrial or intellectual property rights. If RAVATHERM XPS products are purchased, we advise following the most up-to-date suggestions and recommendations.