RAVATHERM™ XPS

TECHNICAL DATASHEET

TDS RT300WBEN19-1 I 2019.12.01.

RAVATHERM XPS 300 WB 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

- **THERMAL BRIDGES** – socle, reinforced concrete structures, cavity wall systems, insulation behind stone/brick-tiles
- **INSIDE WALLS –** renovation, visible concrete walls, historic buildings

TECHNICAL PARAMETERS

Thermal conductivity and thermal resistance parameters

d_N (mm)	30	40	50	60	80	100	120	140	150	160	180	200	220
λ_d (W/mK)	0,033	0,033	0,033	0,033	0,033	0,034	0,034	0,035	0,035	0,035	0,035	0,035	0,035
R_d (m^2K/W)	0,90	1,20	1,50	1,80	2,40	2,90	3,50	4,00	4,25	4,55	5,10	5,70	6,25

Parameter		**Performance**	
Dimensional tolerances		T	T3
Compressive strength		CS(10\Y)	300 (kPa)
Tensile strength perpendicular to faces	30-100 mm	TR	400 (kPa)
	120-220 mm		200 (kPa)
Shear strength		SS	NPD
Reaction to fire		RtF	E
Long term water absorption by total immersion	30 – 50 mm	WL(T)	1,5 (≤ 1,5 Vol.%)
	60 – 220 mm	WL(T)	0,7 (≤ 0,7 Vol.%)
Long term water absorption by diffusion		WD(V)	NPD
Durability of compressive strength against (compressive creep)		CC (2/1,5/50)	NPD
Durability of thermal resistance against heat, weathering, ageing/degradation			
Freeze/thaw resistance after long term water absorption by diffusion		FTCD	NPD
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		≥ 95%	
Surface		"Wafer"	
Board size - length x width (mm)		1250 x 600	

NPD - No Performance Determined | Request additional information in case of higher thickness demand

FINISHING OF THE EDGES

EN DESIGNATION CODE

d ≤ 50 mm	XPS | EN 13164:2012 | T3-CS(10\Y)300-TR400-WL(T)1,5-DS(70,90)-DLT(2)5
50 mm < d < 120 mm	XPS | EN 13164:2012 | T3-CS(10\Y)300-TR400-WL(T)0,7-DS(70,90)-DLT(2)5
120 mm ≤ d	XPS | EN 13164:2012 | T3-CS(10\Y)300-TR200-WL(T)0,7-DS(70,90)-DLT(2)5

STORAGE INFORMATION

RAVATHERM XPS boards can be stored outside, but should be protected against intense sunlight, preferably by retention 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.

RAVATHERM™ XPS

TECHNICAL DATASHEET

TDS RT300WBEN19-1 | 2019.12.01.

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 loose 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 XPS PRODUCTS

- HIGH, LONG LASTING THERMAL INSULATION PERFORMANCE
- EXCELLENT MECHANICAL STRENGHT 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 XPS 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.

PRODUCER

Ravago Building Solutions S.A.

2146 Luxembourg, 76-78 Rue de Merl

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.