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Technical data sheet

BB

DESCRIPTION

STIFERITE BB is an high performance insulation board manufactured from CFC or HCFC free closed cell rigid polyisocyanurate polyiso foam. It's covered on both side with bituminous paper.

MAIN APPLICATIONS

Floor insulation
Insulation of roof under load

GUIDELINE FOR DRAFTING OF TECHNICAL SPECIFICATIONS*

Thermal insulation **STIFERITE BB** in polyiso rigid foam (PIR) of thickness…(*), covered on both sides with a 300 g/m^2 bituminous paper, has:

Declareted thermal conductivity: **λ_D= … W/mK (EN 13165 Annessi A e C)**
Weight percentage of recycled material: **31.42 – 11.12 %**
Compressive strength at 10% deformation: **minimum value = … kPa (EN 826)**
Compressive strength at 2% deformation: **minimum value = … kg/m^2 (EN 826)**
Water vapour diffusion resistance factor for thickness of 100 mm: **μ = 87 (EN 12086)**
Water vapour diffusion resistance: **Z = ... m^{2}hPa/mg (EN 12086)**
Flatness after one-sided wetting: **FW ≤ 20 mm (EN 13165)**
Water absorption by total immersion: **W_{lt} < 5 % (EN 12087)**
Water absorption by partial immersion: **W_{sp} < 0.3 kg/m^2 (EN 1609)**
Euroclass reaction to fire: **F (EN 11925-2)**

Product of Company certified according to UNI EN ISO 9001:2000 specifications, with CE conformity mark on the whole range.

(*)Parameters change according to panel thickness. To determine the values corresponding to the used thickness, please use the specifications indicated on this technical sheet.

Characteristics and performances

Isolamento Termico

Characteristics [Standard]	Describtion	Symbol [Units]	Value Some characteristis depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	–
Average initial thermal condictivity [EN 12667]	Value determinad at 10 °C	$\lambda_{90/90,I}$ [W/mK]	**0,024**									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determinad at 10 °C C	λ_D [W/mk]	**0,028** thickness 20 - 70									
			0,026 thickness 80 - 120									
Declared thermal trasmittance	$U_D = \lambda_D / d$	U_D [W/m^2 K]	**1.40**	**0.93**	**0.70**	**0.56**	**0.47**	**0.40**	**0.33**	**0.29**	**0.26**	**–**
Declared thermal resistance	$R_D = d / \lambda_D$	R_D [m^2 K/W]	**0.71**	**1.07**	**1.43**	**1.79**	**2.14**	**2.50**	**3.03**	**3.49**	**3.85**	**–**

For other characteristics see back →

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Characteristics [Standard]	Describtion	Symbol [Units]	Value Some characteristis depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Project thermal conductivity [UNI EN 12667]	Value determinad at 20 °C and 50 % RH	λ_U [W/mk]	**0,026** tihckness 80 - 120									
Board density	Average value with facing caracteristics	ρ [Kg/m^3]	43 ± 1.5									
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 60 mm. Available on order until 120 mm									
Compressive strenght [EN 826]	Value determinad at 10% deformation	σ_{10} o σ_m [kPa]	150	150	150	160	175	175	160	150	150	150
Compressive strenght [EN 826]	Value determinad at 2% deformation	σ_2 [kPa]	5500	6000	6000	6000	5000	5500	6000	5500	6000	5500
Dimensional stability under specified temperature and umidity [EN 1604]	48h (±1) a 70°C (±2) e 90% RH (±5)	DS(TH) [% dimensions]	2	1	1	1	1	1	1	1	1	1
		[% thickness]	7	6	5	4	3	3	4	4	4	4
	48h (±1) a -20°C (±3)	[% dimensions]	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
		[% thickness]	1	1	1	1	1	1	1	1	1	1
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	F									
Euroclass reaction to fire [EN 11925 -2]	Foam	Euroclass	E									
Specific heat capacity	Value	Cp [J/kg K]	1458									
Water vapor diffusion resistance factor [EN 12086]	Value for thickness of 100 mm	μ (MU)	87 ± 19									
Water vapor diffusion resistance [EN 12086]	The variation depends on the thickness	Z [m^{2}hPa/mg]	6.9 – 13									
Flatness after one-sided wetting [EN 13165]	Value	FW [mm]	≤ 20									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less than 5%$_w$									
Water absorption [EN 1609]	Partial immersion	W_{lp} [kg/m^2]	Less than 0.3									
Weight percentage of recycled material	The variation depends on the thickness	%	**31.42 – 11.12**									

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Tolerances and notes

Tolerances [UNI EN 13165]	Thickness	T2 [mm]	<50 ±2 mm	from 50 to 75 ±3 mm	>75 +5 /-2 mm	
	Dimensions		< 1000 ±5 mm	from 1000 to 2000 ±7,5 mm	from 2000 to 4000 ±10 mm	> 4000 ±15 mm
Notes	stability to the temperature	Stiferite panels are used in a range of continuous temperatures normally included between -40 °C e +110 °C. During short time they can resist also to temperatures till + 200 °C, or corresponding to the temperature of fused bitumen, without particular problems. Long exposures to the temperatures could cause deformations to the foam or to the coats, but without causing sublimation or fusion. Resistance to the torch and some other reactions to fire are characteristics connected with the kind of used panel.				
	Dimensional stability	The paper covering, even if bitominous paper, is sensitive to the variantions of damp. The absorpiton of damp for direct exposure or for contact with wet surfaces and the following desiccation, modifies the stability of the coverings causing the loss of the flatness. For not problems is advisable to fix pannels and to complete the laying with immediate execution of the other elements of finish or protection.				
	Aspect	Any possible little areas of non-adhesion between coats and foam are originated by the production process and don't prejudice in any way the physical-mechanical properties of the panels.				