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Technical data sheet

GT5

DESCRIPTION

STIFERITE GT5 is an height performance insulation sandwich board made with STIFERITE GT, a rigid polyisocyanurate polyiso foam core, blowing without CFC or HCFC, coverd on both side with Duotwin® facing, and on one side torch bonded to a polyester reinforcement bituminous waterproofing membrane (unit weight 4.5 kg/m^2) with slate finish. The board sides have 10 cm of selvage.

MAIN APPLICATIONS

Thermal insulation and waterproofing base sheet of flat and pitched roof

GUIDELINE FOR DRAFTING OF TECHNICAL SPECIFICATIONS*

STIFERITE GT5 mades with **STIFERITE GT** in polyiso rigid foam (PIR) of thickness…(*), covered on both sides with Duotwin® facing, and on one side torch bonded to a polyester reinforcement bituminous waterproofing membrane (unit weight 4.5 kg/m^2) with slate finish, has:

Thermal insulation property
Declareted thermal conductivity: **λ_D= 0.024 W/mK (EN 13165 Annessi A e C)**
Compressive strenght: **minimum value = … kPa (EN 826)**
Water vapour diffusion resistance factor: **μ = 148 (EN 12086)**
Water vapour diffusion resistance: **Z = 21 m^2/hPa (EN 12086)**
Water absorptin by total immersion: **WL < 1 % (EN 12087)**
Euroclass reaction to fire: **F (EN 11925-2)**

Glass fiber reinforcement bituminous waterproofing membrane property
Mass: **3 kg/m^2 (EN 1849-1)**
Tensile strength: **longitudinal 400 N/5 cm e trasversal 300 N/5 cm (EN 12311-1)**
Elongation at break: **longitudinal 35 % e trasversal 35 % (EN 12311-1)**
Tear resistance: **longitudinal 130 N e trasversal 130 N (EN 12310-1)**
Cold flexibility: **- 5 ° C (EN 1109)**
Heat resistance: **110° C (EN 1110)**

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

(*) Not stated parameters change according to thickness. For introducing the values corresponding to the used thickness, please use the specifications indicated on this technical sheet.

Characteristics and performances

Thermal insulation

Characteristics [Standard]	Describtion	Symbol [Units]	Value Some characteristis depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Average initial thermal condictivity [EN 12667]	Value determinad at 10 °C	$\lambda_{90/90,I}$ [W/mK]	**0,022**									
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determinad at 10 °C C	λ_D [W/mk]	**0,024**									
Declared thermal trasmittance	$U_D = \lambda_D / d$	U_D [W/m^2 K]	**1.20**	**0.80**	**0.60**	**0.48**	**0.40**	**0.34**	**0.30**	**0.27**	**0.24**	**0.20**
Declared thermal resistance	$R_D = d / \lambda_D$	R_D [m^2 K/W]	**0.83**	**1.25**	**1.67**	**2.08**	**2.50**	**2.92**	**3.33**	**3.75**	**4.17**	**5.00**

For other characteristics see back →

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Thermal insulation characteristics and performances

Characteristics [Standard]	Describtion	Symbol [Units]	Value Some characteristis depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Compressive strenght [EN 826]	Value determinad at 10% deformation	σ_{10} o σ_m [kPa]	150	150	140	150	150	150	130	130	130	130
Dimensional stability under specified temperature and umidity [EN 1604]	48h (±1) a 70°C (±2) e 90% UR (±5)	DS(TH) [% dimensions]	1	1	1	1	1	1	1	1	1	1
		[% thickness]	5	4	4	4	4	4	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
Board density	Average value with facing caracteristics	ρ [Kg/m^3]	36									
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 120 mm									
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°C]	1453									
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: ○ 15 mm plaster ○ Brick from 12 mm ○ STIFERITE GT from 40 mm ○ Air from 10 mm ○ Brick from 8 mm ○ 15 mm plaster	R_w [dB]	54									
Water vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	148 ± 24									
Water vapor diffusion resistance [EN 12086]	Value	Z [m^2/hPa]	21 ± 3									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 1%$_w$									
			For other characteristics see back →									

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polyester reinforcement bituminous waterproofing membrane with slate finish

Characteristics [Standard]	Describtion	Symbol [Units]	Value
Mass [EN 1849-1]		[Kg/m^2]	4.5
Thickness [EN 1849-1]		[mm]	–
Tensile strenght [EN 12311-1]	Longitudinal	[N/5 cm]	400
	Trasversal		300
Elongation at break [EN 12311-1]	Longitudinal	[%]	35
	Trasversal		35
Tear resistance [EN 12310-1]	Longitudinal	[N]	130
	Trasversal		130
Cold flexibility [EN 1109]		[° C]	- 5
Heat resistance [EN1110]		[° C]	110

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.				
	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.				