

CLASS S HP

DESCRIPTION

STIFERITE CLASS S HP is an height performance insulation board with a rigid polyisocyanurate polyiso foam core, blowing without CFC or HCFC, covered on both side with saturated fiber glass.

MAIN APPLICATIONS

Insulation of roofs also under synthetic mantles
Insulation of floors under load
Insulation of walls
External thermal insulation

GUIDELINE FOR DRAFTING OF TECHNICAL SPECIFICATIONS*

Thermal insulation **STIFERITE CLASS S HP** in polyiso rigid foam (PIR) of thickness...(*), covered on both sides with saturated glass fiber, has:

Declared thermal conductivity: $\lambda_D = \dots$ W/mK (EN 13165 Annex A e C)

Compressive strenght: **minimum value = ... kPa (EN 826)**

Water vapour diffusion resistance factor: **$\mu = 56$ (EN 12086)**

Water vapour diffusion resistance: **$Z = 8.0$ m²/hPa (EN 12086)**

Water absorptin by total immersion: **WL < 2 % (EN 12087)**

Euroclass reaction to fire: **E (EN 11925-2)**

Enviromental product declaration for 60 mm thickness (ISO 14040 e MSR 1999:2)

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

Isolamento Termico

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	120
Average initial thermal conductivity [EN 12667]	Value determinad at 10 °C	$\lambda_{90/90,1}$ [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	0.22
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	4.62

For other characteristics see back →

Other information	To obtain further technical data call green numer 800840012		
Technical data sheet	Stiferite CLASS S HP	Rev. 5 15/10/2008	Author: F. Raggiotto
			Verified: L. Tolin

Technical data sheet

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Characteristics and performances

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			-	30	40	50	60	70	80	90	100	120
Compressive strenght [EN 826]	Value determinad at 10% deformation	$\sigma_{10} \sigma_m$ [kPa]	-	200	200	200	200	200	200	200	200	200
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
		[% thickness]	-	6	5	4	3	3	3	3	3	3
	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
		[% thickness]	-	1	1	1	1	1	1	1	1	1
Nominal thickness [EN 823]		d_N [mm]	production from 30 to 120 mm									
Board density	Average value with facing characteristics	ρ [Kg/m ³]	43									
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	E									
Specific heat capacity	Value	C_p [J/kg°C]	1475									
Water vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	56 \pm 2									
Water vapor diffusion resistance [EN 12086]	Value	Z [m ² /hPa]	8.0 \pm 0.3									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 2% _w									

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 $\pm 7,5$ 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 +120 °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.						

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