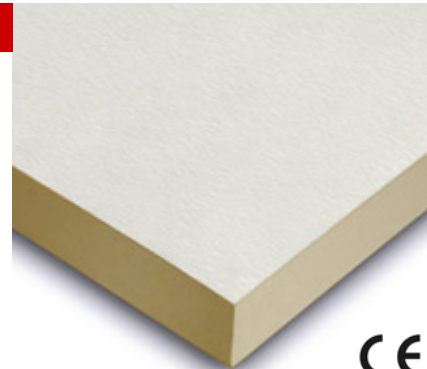


Technical Data Sheet

Class S



Description

The Class S panel is a high performance insulation board made with a rigid polyisocyanurate polyiso foam core, blown without the use of CFC or HCFC, covered on both side with saturated fiber glass.

Main Applications

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

Characteristics and performance

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 determined at 10°C	$\lambda_{90/90,1}$ [W/mK]	0.024									
Declared thermal conductivity [UNI EN 13165 annex A & C]	Value determined at 10°C	λ_D [W/mK]	0.028 thickness 20 - 70									
			0.026 thickness 80 - 120									
Declared thermal transmittance	$U_D = \lambda_D / d$	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
Compressive strength [EN 826]	Value determined at 10% deformation	$\sigma_{10} \sigma_m$ [kPa] (Tons/m ²)	160 (16)	150 (15)	150 (15)	160 (16)	160 (16)	160 (16)	150 (15)	150 (15)	150 (15)	150 (15)
Dimensional stability under specified temperature and humidity [EN 1604]	48h (±1) to 70°C (±2) at 90% UR (±5)	DS(TH) [% dimensions]	1	1	1	1	1	1	1	1	1	1
		[% thickness]	6	6	5	4	3	3	4	4	4	4
	48h (±1) to -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
Nominal thickness [EN 823]		d_N [mm]	production from 20 to 120 mm									

Board density	Average value with facing characteristics	ρ [Kg/m ³]	35
Euro class reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	E
Specific heat capacity	Value	C_p [J/kg°C]	1464
Modulus of elasticity for compressive	Value	[kg/cm ²]	57.9 ± 9.62
Modulus of elasticity for tensile	Value	kg/cm ²	56.4 ± 4.66
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: ○ 15 mm plaster ○ Brick from 12 mm ○ Class S from 50 mm ○ Air from 10 mm ○ Brick from 8 mm ○ 15 mm plaster	R_w [dB]	54
Acoustic isolation to wall [UNI EN ISO 140-3] [UNI EN ISO 717-1]	Stratigraphy: ○ 15 mm plaster ○ Brick from 25 mm ○ External thermal insulation with CLASS S from 80 mm	R_w dB]	52
Water vapor diffusion resistance factor [EN 12086]	Value	μ (MU)	56 ± 2
Water vapor diffusion resistance [EN 12086]	Value	Z [m ² /hPa]	8.0 ± 0.3
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 2% _w
Water absorption [EN 12087]	Partial immersion	W_{ip} [kg/m ³]	Less then 0.2

Tolerances and Notes						
Tolerances [UNI EN 13165]	Thickness	T2 [mm]	<50 ±2 mm	from 50 to 75 ±3 mm		>75 +5 /-2 mm
	Length and breath		< 1000 ±5 mm	from 1000 to 2000 ±7,5 mm	from 2000 to 4000 ±10 mm	> 4000 ±15 mm
Notes	Temperature range	<p>Class S panels are used in a range of continuous temperatures normally included between -40°C and +110°C. For a short period of time they can resist to temperatures up to +200 °C, equivalent to the temperature of melt bitumen, without particular problems.</p> <p>Long exposures to the temperatures could cause deformations to the foam or to its coat, but without causing sublimation or fusion.</p> <p>Resistance to the direct flame and some other reactions to fire are characteristics connected with the kind of material (see euroclass).</p>				
	Visual aesthetics	<p>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.</p>				

The manufacturer is certified according to UNI EN ISO 9001:2000 specifications, and all products are CE certified