

**Technical data sheet**

**IP**

**DESCRIPTION**

STIFERITE IP is an height performance insulation board with a rigid polyurethane foam core, blowing without CFC or HCFC, covered on both side with kraft bituminous paper.

**MAIN APPLICATIONS**

Refrigerator room and industrial under floor insulation  
Torch application is not recommended with this product

**GUIDELINE FOR DRAFTING OF TECHNICAL SPECIFICATIONS\***

Thermal insulation **STIFERITE IP** in polyurethane rigid foam (PUR) of thickness...(\*), covered on both sides with kraft bituminous paper, 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:  **$\mu = 87$  (EN 12086)**

Water vapour diffusion resistance:  **$Z = 13 \text{ m}^2/\text{hPa}$  (EN 12086)**

Water absorptin by total immersion:  **$WL < 5 \%$  (EN 12087)**

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.**

(\* ) 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	-	
Average initial thermal conductivity [EN 12667]	Value determinad at 10 °C	$\lambda_{90/90,1}$ [W/mK]	<b>0,024</b>										
Declared thermal conductivity [UNI EN 13165 annex A e C]	Value determinad at 10 °C C	$\lambda_D$ [W/mk]	<b>0,028</b> thickness 20 - 70										
			<b>0,026</b> thickness 80 - 120										
Declared thermal trasmittance	$U_D = \lambda_D / d$	$U_D$ [W/m <sup>2</sup> K]	<b>1.40</b>	<b>0.93</b>	<b>0.70</b>	<b>0.56</b>	<b>0.47</b>	<b>0.40</b>	<b>0.33</b>	<b>0.29</b>	<b>0.26</b>	-	
Declared thermal resistance	$R_D = d / \lambda_D$	$R_D$ [m <sup>2</sup> K/W]	<b>0.71</b>	<b>1.07</b>	<b>1.43</b>	<b>1.79</b>	<b>2.14</b>	<b>2.50</b>	<b>3.03</b>	<b>3.49</b>	<b>3.85</b>	-	
Compressive strenght [EN 826]	Value determinad at 10% deformation	$\sigma_{10} \text{ } \sigma_m$ [kPa]	130	130	130	130	130	130	130	130	130	-	
Nominal thickness [EN 823]		$d_N$ [mm]	production from 20 to 100 mm. Available on order until 120 mm										
For other characteristics see back →													

Other information	To obtain further technical data call <b>green numer 800840012</b>			
Technical data sheet	Stiferite IP	Rev. 9 15/10/2008	Author: F. Raggiotto	Verified: L. Tolin

**Technical data sheet**

**IP**

Pag. 2/2

**Characteristics and performances**

Characteristics [Standard]	Description	Symbol [Units]	Value									
			Some characteristics depend on the thickness (mm)									
			20	30	40	50	60	70	80	90	100	-
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]	5	5	5	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	-
		[% thickness]	1	1	1	1	1	1	1	1	1	-
Board density	Average value with facing characteristics	$\rho$ [Kg/m <sup>3</sup> ]	35									
Euroclass reaction to fire [EN 13501-1] [EN 11925 -2] [EN 13823 (SBI)]	Class	Euroclass	F									
Specific heat capacity	Value	Cp [J/kg°C]	1499									
Water vapor diffusion resistance factor [EN 12086]	Value	$\mu$ (MU)	87 ± 19									
Water vapor diffusion resistance [EN 12086]	Value	Z [m <sup>2</sup> /hPa]	13 ± 3									
Water absorption [EN 12087]	Total immersion for 28 days	WL [%]	Less then 5% <sub>w</sub>									

**Tolerances and notes**

Tolerances [UNI EN 13165]	Thickness	T2 [mm]	<50 ±2 mm		from 50 to 75 ±3 mm		>75 +5 /-2 mm	
			< 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 ° 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 bituminous paper, is sensitive to the variations of damp. The absorpton 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.						

Other information	To obtain further technical data call <b>green numer 800840012</b>		
Technical data sheet	Stiferite IP	Rev. 9 15/10/2008	Author: F. Raggiotto Verified: L. Tolin