

# FIRE B



## ■ Description

**STIFERITE FIRE B** is a high performance insulation board manufactured from CFC or HCFC free, closed cell polyisocyanurate (PIR) foam. It's covered on the side to be exposed to fire risk with a fiber glass integrated with expandable graphite, called Stiferite Fire B facer®, and on the other side from saturated mineral glass.

## ■ Guideline for drafting of technical specifications

Thermal insulation **STIFERITE FIRE B** in polyiso rigid foam (PIR) of thickness—(\*), covered on the side to be exposed to fire risk with a fiber glass integrated with expandable graphite, called Stiferite Fire B facer®, and on the other side from saturated mineral glass, has:

Declared thermal resistance:  $R_D = \dots$  m<sup>2</sup>K/W (EN 13165 Annex A and C)

... (it is recommended to complete the technical specification using the most relevant features and performance for the specific application)

**STIFERITE FIRE B** is produced of Company certified according to: **UNI EN ISO 9001:2015** quality management system, **UNI EN ISO 14001:2015** environmental management system, **OHSAS 18001:2007** occupational health and safety management system, and it has CE marking and labelling. The **Environmental Product Declaration (EPD)**, verified by the Third Party Liability, and the **Environmental Minimum Criteria (CAM)** according to **Green Public Procurement (GPP)** are available.

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

## ■ Dimensions

length and width  
600 x 1200 mm  
nominal thickness [d] EN 823:  
from 20 to 200 mm

## ■ Main applications

Isolation of all applications where the highest reaction to fire performance obtainable from organic panels is required. Insulation of ventilated walls. Insulation of roofs under waterproof membranes cold applied.



## ■ MAIN CHARACTERISTICS AND PERFORMANCE - Relevant to the CE marking [UNI EN 13165]

### ■ Declared thermal conductivity - $\lambda_D$ [W/mK]

UNI EN 13165 Annex A e C

Value determined at an average temperature of 10° C  
see table - values according to thickness

### ■ Declared thermal resistance - $R_D = d / \lambda_D$ - [m<sup>2</sup>K/W]

see table - values according to thickness

### ■ Declared thermal transmittance - $U_D = \lambda_D / d$ [W/m<sup>2</sup>K]

see table - values according to thickness

### ■ Reaction to fire

EN 13501-1, EN 11925-2, EN 13823

**B s1 d0 EUROCLASS**

### ■ Compressive stress at 10% deformation - $\sigma_{10}$ [kPa]

EN 826

> 150 [CS(10/Y)150] CE Designation code

### ■ Tensile strength perpendicular to faces - $\sigma_{mt}$ [kPa]

EN 1607

> 35 [TR35] CE Designation code

### ■ Water vapour diffusion resistance factor - $\mu$

EN 12086

56 ± 2 [MU56] CE Designation code

### ■ Short term water absorption by partial immersion [kg/m<sup>2</sup>]

EN 1609

< 0,2 [WS(P)0,2] CE Designation code

### ■ Long term water absorption by total immersion [% weight]

EN 12087

< 2 per d < 120 mm [WL(T)2] CE Designation code

< 1 per d ≥ 120 mm [WL(T)1] CE Designation code

### ■ Deviation from flatness after one-sided wetting [mm]

EN 13165

≤ 10 [FW10] CE Designation code

### ■ Flatness tolerance $S_{max}$ [mm]

EN 825

± 5 Area < 0,75 m<sup>2</sup>

± 10 Area > 0,75 m<sup>2</sup>

d mm	$\lambda_D$ W/mK	$R_D$ m <sup>2</sup> K/W	$U_D$ W/m <sup>2</sup> K
20	0,028	0,71	1,40
30		1,07	0,93
40		1,43	0,70
50		1,79	0,56
60		2,14	0,47
70	0,026	2,50	0,40
80		3,08	0,33
100		3,85	0,26
120	0,025	4,80	0,21
140		5,60	0,18
160		6,40	0,16
180		7,20	0,14
200		8,00	0,12

### ■ Dimensional stability [level]

EN 1604

48 h, 70° C, 90% R.H.

3 per d < 40 mm [DS(70;90)3] CE Designation code

4 per d ≥ 40 mm [DS(70;90)4] CE Designation code

48 h, -20° C

2 [DS(-20;0)2] CE Designation code

### ■ Tolerances [mm]

EN 13165

Length and width

± 5 < 1000 mm [T2] CE Designation code

± 7,5 da 1001 a 2000 mm [T2] CE Designation code

### ■ Thickness [mm]

± 2 < 50 mm [T2] CE Designation code

± 3 da 50 a 75 mm [T2] CE Designation code

+ 5/-2 ≥ 75 mm [T2] CE Designation code

## OTHER CHARACTERISTICS AND PERFORMANCE

- **Overall density -  $\rho$  [kg/m<sup>3</sup>]**  
EN1602 Board average value  
**47 ± 1,5**
- **Specific heat - Cp [J/kg° K]**  
Average value  
**1464**
- **Compressive stress at 2% deformation -  $\sigma_2$  [kg/m<sup>2</sup>]**  
EN 826  
**> 5000**
- **Pull-through resistance - [N]**  
EN 16382  
**> 750**
- **Water vapour resistance - Z [m<sup>2</sup>hPa/mg]**  
EN 12086  
**4,2 - 8,0**
- **Dimensional stability [% Relative changes]**  
EN 1604  
**48 h, 70° C**  
**< 1**
- **Weight percentage of recycled material - [%]**  
Average values  
**2,97**

## ADDITIONAL REPORTS AND CERTIFICATION

- **Management System Certification:**
  - UNI EN ISO 9001:2015 quality management system,
  - UNI EN ISO 14001:2015 environmental management system,
  - OHSAS 18001:2007 occupational health and safety management system
- **Environmental Product Declaration (EPD), by the Third Party Liability**  
ISO 14025 and EN 15804
- **External fire Exposure to roof**  
EN 1187  
**Broof (t 2) and Broof (t 3)**
- **Release of volatile organic compounds**  
UNI EN ISO 16000  
**A French class**



## NOTES

### ■ Temperature stability

Stiferite panels can be used in a continuous temperature range of -40° C to +110° C. For periods of time they can withstand temperatures up to + 200° C, or equivalent to the softening temperature of bitumen, without any particular problems. Long exposures at temperatures above + 110° C may cause deformations to the foam or coatings, but do not cause sublimation or melting.

### ■ Aspect

Any small non-adhesion areas between the facers and the foam or holes originate from the production process and they do not in any way affect the physical-mechanical properties of the panels. A prolonged exposure of polyurethane foam to UV rays can cause surface oxidation, the phenomenon does not affect the basic characteristics and performance of the panel.

### ■ Packaging & Storage

STIFERITE panels of standard sizes are normally packed with PE, in closed packages with CE mark label. Store the packages raised from the ground. For long periods, store the packages in wet area.

### ■ Warning

The data shown in this sheet are binding for the features and performances provided by the CE marking. Other features and additional information may be modified even if no specific signal is available.

### ■ Other notes

To obtain technical data not covered in this Technical Data Sheet, contact the Stiferite Technical Office