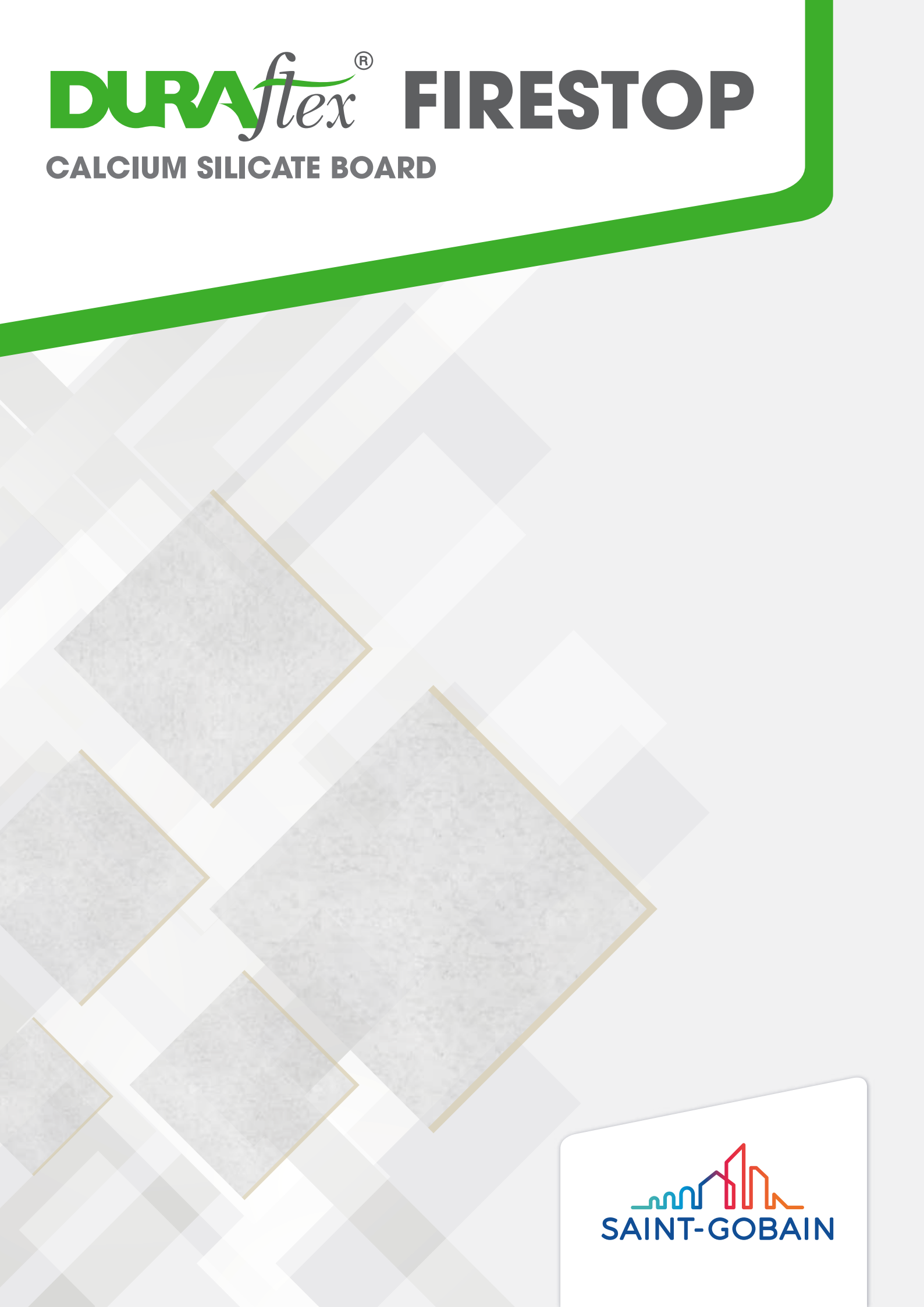


# **DUR***aflex*<sup>®</sup> **FIRESTOP**

**CALCIUM SILICATE BOARD**





## TECHNICAL DATASHEET

### CHAPTER 1: INTRODUCTION

#### Characteristic

DURAf<sup>flex</sup>® Firestop is a carefully engineered calcium silicate board, consisting of cement, fibre, perlite, aluminium powder, mica, and vermiculite. They enhance the fire-resistant performance of protective system while retaining its durability and dimensional stability features throughout the working life span of material.

#### Main application

DURAf<sup>flex</sup>® Firestop is suitable for many protective applications such as partitions, concealed ceilings, ductworks, M&E enclosures, etc. DURAf<sup>flex</sup>® Firestop is used in areas where a high-performance fire rating system is required, an excellent option for interior designers and contractors.

#### Board colour

■ Light grey color.

#### Board thickness

9mm, 12mm, 15mm

#### Board printing

Reverse: Product name, standard, size, date of manufacture, lot number (Boards with ≤ 12mm thickness), Edge: Product name, standard, size, date of manufacture, lot number (Boards with ≥ 15mm thickness).

#### Board range

Model	Thickness (mm)	Width x Length (mm x mm)	Edge Type	Nominal Surface Density (kg/m <sup>2</sup> )	Nominal Weight per Board (kg)
DFFS	9	1220 x 2440	SE    RE <sup>(2)</sup>	9.23 <sup>(3)</sup>	27.5 <sup>(3)</sup>
	12	1220 x 2440	SE    RE <sup>(2)</sup>	12.30 <sup>(3)</sup>	36.6 <sup>(3)</sup>
	15	1220 x 2440	SE    RE <sup>(2)</sup>	15.38 <sup>(3)</sup>	45.8 <sup>(3)</sup>
	Others <sup>(1)</sup>	Customized size <sup>(1)</sup>	-	-	-

Note:

<sup>(1)</sup> Customized order requires minimum lead-time and quantity.

<sup>(2)</sup> RE = Recessed Edge, SE = Square Edge.

<sup>(3)</sup> All weights are approximate within a 5% tolerance.

#### Nominal Density

1,025 kg/m<sup>3</sup>



### CHAPTER 2: PRODUCT STANDARDS

ASTM C1186 - Standard specification for flat fibre cement sheets. Type B Grade.

### CHAPTER 3: BOARD PERFORMANCE (I)

Characteristic	Performance
Flexural strength	≥ 4 MPa
Moisture movement	≤ 0.05 %
Water absorption	≤ 60 %
Moisture content	≤ 15 %

**CHAPTER 3: BOARD PERFORMANCE (II)**

**Emission rate/Hazardous substances**

Clause	Test Parameter	Test Method	Unit	Result	SGBC Criteria	Justification
A5	Avoidance of Hazardous Substances					
i)	Cadmium (Cd)	IEC 62321- 5	mg/kg	Not Detected	< 100	Pass
ii)	Lead (Pb)		mg/kg	Not Detected	< 1000	Pass
iii)	Mercury (Hg)	IEC 62321 - 4	mg/kg	Not Detected	< 1000	Pass
iv)	Hexavalent Chromium (Cr 6+)	IEC 62321 - 7 - 2	mg/kg	Not Detected	< 1000	Pass
B1	Emission Analysis (After 7 days)					
i)	TVOC emission	ISO 16000-9	mg/kg <sup>3</sup>	0.03	< 0.1	Pass
ii)	Formaldehyde emission		mg/kg <sup>3</sup>	Not Detected	< 0.01	Pass
<b>Standard</b>		<b>Classification</b>				
EN 13501-1		Class A1				

**CHAPTER 4: INSTALLATION (I)**

**General**

Observe the appropriate health and safety regulations when working on-site, i.e. personal protective clothing and equipment, etc. The following notes are intended as general guidance only. In practice, consideration must be given to design criteria requiring specific project solutions.

**Storage**

DURAf<sup>flex</sup>® Firestop should be stored on a firm, flat, and level surface. If the boards are temporarily stored outside, they should be kept clear of the ground and securely covered with an anchored polythene sheet or tarpaulin to protect from dampness and inclement weather.

**Handling**

The board should always be carried on the edge by two people. Operate from the corners of the stack, and lift the whole board in a vertical position. The boards should not be lifted while the flat face is parallel with the ground. Consider the board weight while handling.

**Cutting**

For boards with thickness under 10mm, it is easy to cut using the scoring knife and snapping the board over a straight edge. For boards with higher thickness, use a handheld circular saw with suitable dust extraction or a snapper shear tool. For complex details (i.e. doors and socket details), it is recommended to use a jigsaw.

**Fixing**

DURAf<sup>flex</sup>® Firestop should be placed on an appropriate metal framing structure with the printed face facing inwards, then secure to the metal framing with a countersinking screw at minimum 12mm distance from the edges and ends of the board. For partition and wall applications, insert screws at a maximum of 300mm centres at all frame positions. For wall/partition with calcium silicate board, arrange a visible joint with a gap 4-5mm width at every 4m length or every 3 boards' joint, fill this gap with a specialized sealant to ensure fire and acoustics performances. A gap of 2-3mm, using a specialist joint compound is recommended for a normal joint between boards.

**Repair**

Cut out the affected area to the nearest framing member and replace by the same type of board and fix it by the suitable screws. Fill the joints with a specialist jointing compound and finish in the recommended way. When it is dry, decoration work should follow.

**Finishing**

Use a specialist jointing compound for a smooth, continuous, crack-free surface ready for priming and final decoration. For painting, joint the boards using a specialist jointing compound. After the joint treatment has dried, decoration should follow with minimum delay.





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