Wedge

WEDGE INDUSTRIES LIMITED

FIRE DOOR ASSEMBLY COMPONENTS

FD30 FD60 FD120 FD240

CERTIFIED FIRE PROTECTION SOLUTIONS

www.wedge-india.com

Complete Fire Door Solutions

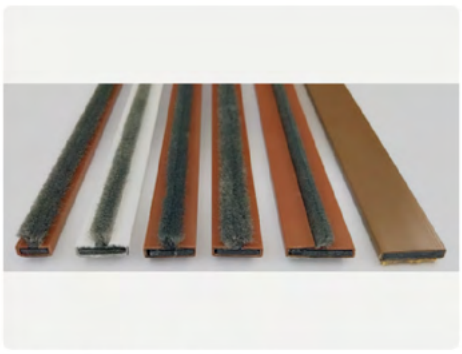
Wedge Industries Limited engineers a complete range of fire-rated core boards, infill insulation and intumescent seals for the manufacture of certified fire door assemblies. Every component is asbestos-free, independently tested to international standards and proven to ratings up to FD240. From dense calcium silicate cores to graphite intumescent edge seals, the range delivers a single, specification-grade source for fire door manufacturers worldwide.

- Fireproof Calcium Silicate Boards
- High Density Mineral Wool Boards
- Fireproof MgO Boards
- Fireproof Perlite Boards
- Intumescent Fire Seals

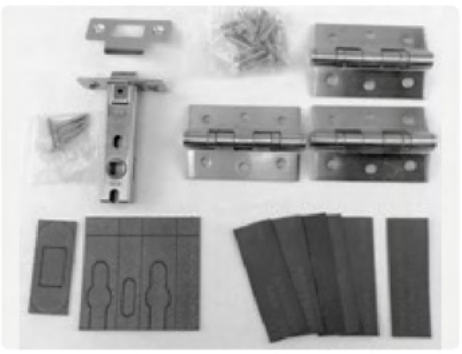
TESTED & CERTIFIED TO INTERNATIONAL STANDARDS

EXOVA	BRE	UL	CERTIFIRE	CE	ASFP	FSRG

Calcium Silicate Core Boards



Intumescent Fire Seal Strips



Hardware & Hinge Protection Kits

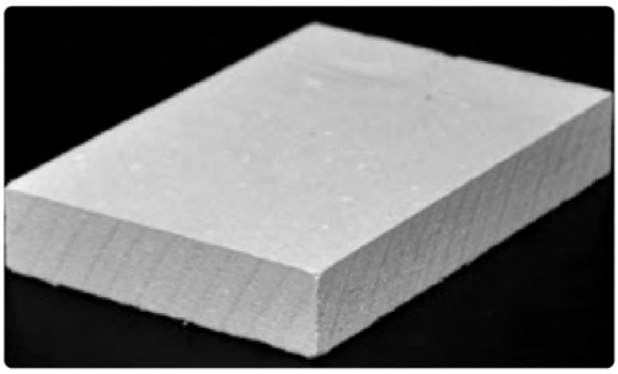
Wedge

WEDGE STARPAN SP1150

Fire Door Calcium Silicate Board

FD60 FD120

Wedge StarPan SP1150 is a high density, high performance fire resistant calcium silicate board engineered for manufacturing fire doors with ratings up to FD120 (120 minutes) with two layers of 9 mm, or FD60 (60 minutes) with a single 9 mm layer. Manufactured with high-temperature resistant insulation fibres reinforced with calcium silicate, SP1150 provides thermal resistance up to 1400°C in the event of fire with a guaranteed service life exceeding 30 years.



Applications

- Manufacturing Fire Resistant Doors (120 Minutes)
- Fire Resistant Acoustic Doors
- Access Panels & Trap Doors
- Lift Doors & Fire Escape Areas
- Aesthetic Curved Ceilings
- Moisture Resistant Ceiling Applications
- Fire Protection to Concrete Structures
- Backing Wall for Wet Area Ceramic Tiling
- Casings for Building Services
- Fire Rated Backing Board for Metal Claddings
- Fire Rated Industrial Wall Linings
- Perforated Finishes for Acoustic Spaces
- Fire Resistant Barriers & Spandrels

1400°C

Thermal resistance in the event of fire, with a density of **1150 kg/m^3** and a guaranteed service life exceeding **30 years**.

Wedge

WEDGE STARPAN SP1150

Technical Specification

PROPERTY	VALUE
Density	1150 kg/m^3 ±10%
Nominal Weight	6.6 kg/m^2 (6mm) / 9.9 kg/m^2 (9mm) / 12.6 kg/m^2 (12mm)
Standard Sizes	1220 × 2440 mm / 1200 × 2400 mm
Colour	Natural off-white
Finish	Sanded smooth one side, slightly textured reverse
Thermal Conductivity	≤0.15 W/(m·K)
Water Content	≤10%
Moisture Movement	≤0.25%
Heat Shrinkage	≤0.5%
Bending Strength (Cross)	≥10 MPa
Bending Strength (Parallel)	≥8 MPa

MANUFACTURING TOLERANCES

Length ±5mm | **Width** ±5mm | **Diagonal** ±5mm | **Thickness** ±0.3mm (±0.6mm for greater thickness)

Standard full sized board maximum thickness = 25mm

Pallet Data

THICKNESS (MM)	DIMENSIONS (MM)	BOARDS / PALLET	SURFACE (M^2)	WEIGHT (KG)
6	2440 × 1220	92	273.8	1720
9	2440 × 1220	61	181.5	1688
12	2440 × 1220	46	136.9	1698
15	2440 × 1220	36	107.2	1662
20	2440 × 1220	27	80.4	1664
25	2440 × 1220	22	65.4	1681

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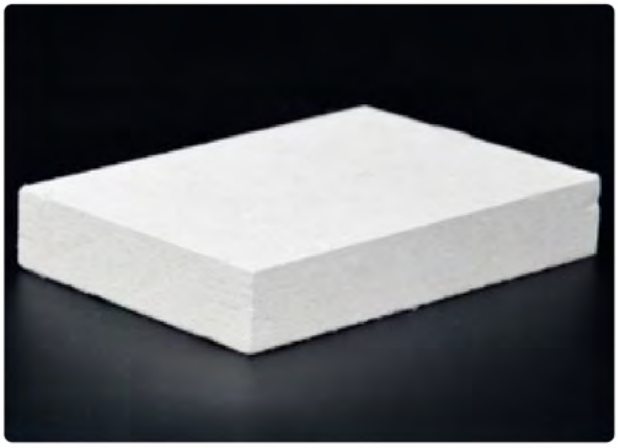
WEDGE FP1000

High Performance Fire Door Calcium Silicate Board

FD240

FP1000 is a high-temperature resistant Calcium Silicate Insulating Board achieving a fire rating of 240 minutes. Manufactured from high-temperature resistant fireproof materials, cement, and calcium silicate based asbestos-free minerals, FP1000 boards are large format and easy to handle, suitable for the production of mechanically strong, self-supporting fire door constructions.



Features & Benefits

- ✓ Maximum short-term temperature resistance: 1200°C
- ✓ Continuous operating temperature: 450°C
- ✓ Excellent thermal insulation performance
- ✓ Unaffected by humidity
- ✓ High fire resistance up to 240 minutes (10 mm thickness)
- ✓ Service life guarantee: 15+ years
- ✓ High acoustic insulation properties

Applications

- Structural Steel Protection & Self-Supporting Ceilings
- Dryers & Oven Insulation
- Industrial Furnaces & Apparatus Construction
- Cladding to Steel Ducts
- M&E Services Enclosure & Smoke Barriers
- Access Panels & Hatches
- Tunnel Lining & Concrete / Brick Upgrading
- Wet & Damp Room Linings
- Timber Floor Protection & Upgrading
- Fire Door Manufacturing — FD30, FD60, FD120, FD240

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CALCIUM SILICATE BOARDS

Technical Comparison

PROPERTY	FP1000	FP1150 (SP1150)
Colour	White / Grey	White / Light Brown
Short Term Service Temp. (°C)	1200	1000
Classification Temperature (°C)	400	100
Density (kg/m^3)	880–900	1150
Thermal Conductivity @ 20°C (W/m.K)	0.16	0.18
Thermal Conductivity @ 100°C	0.18	–
Thermal Conductivity @ 200°C	0.20	–
Tensile Strength (MPa)	5	4
Flexural Strength (MPa)	8	8
Shrinkage % @ 400°C, 24h	0.25	–
Compression Strength (MPa)	10	8
Fire Rating (10mm board, minutes)	**240**	**120**
Building Material Class	A1, Non-Combustible	A1, Non-Combustible
Standard Size (mm)	2450 × 1220	2500 × 1220
Thickness Range (mm)	4–30	4–30
Water Content (%)	<10	<10
Moisture Movement (%)	<0.25	<0.25

Both boards are asbestos-free and classified A1 Non-Combustible to EN 13501-1. FP1000 offers the highest fire rating of the range at FD240.

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WEDGE HDRW 850

High Density Mineral Wool Boards

FD60 FD120

Wedge HDRW 850 are Refractory Insulation Boards manufactured from high quality refractory grade mineral fibres bonded with high-temperature clays. These boards offer a unique combination of properties for industrial and fire door applications, combining fire resistance, thermal insulation, and high compressive strength.

Key Features

- ✓ Strong rigid construction with high compressive strength
- ✓ Temperature resistance up to 850°C
- ✓ Very low thermal conductivity at high temperatures
- ✓ High electrical resistance at elevated temperatures
- ✓ High fire resistance and heat shield performance
- ✓ Easy to cut, laminate, and punch
- ✓ Adaptable by wet moulding for pipe insulation

Applications

- Fire Resistant Wooden & Steel Door Manufacturing
- Fire Resistant Lift Door Manufacturing
- Heat Shield / Thermal Protection Systems
- Fire Protection & Resistant Partitions
- Electrical & Home Appliances Insulation Gaskets

Technical Properties

PROPERTY	HDRW 850
Colour	Light Brown
Classification Temperature (°C)	850
Density (kg/m^3)	950
Thermal Conductivity @ 400°C (W/m.K)	0.10
Thermal Conductivity @ 600°C	0.11
Thermal Conductivity @ 800°C	0.12
Fire Resistance – 10mm (min)	**120**
Fire Resistance – 5mm (min)	**60**
Tensile Strength (MPa)	3.5
Shrinkage % @ 1000°C	2
Compression @ 70 kg/cm^2	15

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WEDGE WRRB

Rigid Mineral Wool Insulation Boards

Wedge WRRB are Rigid Mineral Wool Boards made from pure stone wool bonded with high quality thermosetting resin binders. These non-asbestos, non-combustible multifunction boards possess an extremely high melting temperature. They produce no toxic smoke in the event of fire and form an excellent barrier against flame spread, protecting occupants and reducing property damage. Available in densities from 48 to 160 kg/m^3.

Features & Advantages

- Very high acoustic / sound insulation performance
- High thermal integrity — will not slump, shrink or expand
- Excellent moisture control — water repellent option
- Non-combustible with high fire resistance
- Cost-efficient insulation performance
- Stable and jolt-proof construction
- High permanent temperature resistance
- Low thermal conductivity & low organic binder content
- Rot-resistant, non-ageing, chemically neutral
- Easy to machine and fabricate

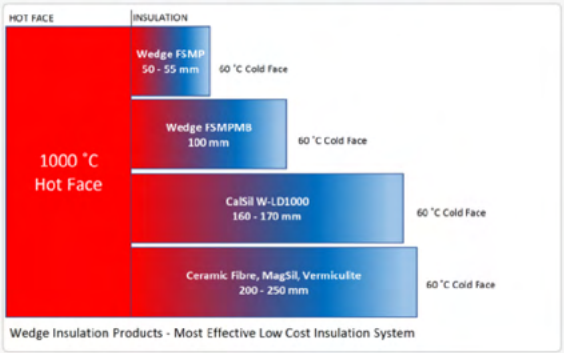
Applications

- Production of Sandwich Panels
- Fire Door Manufacturing
- Fireproofing of Power Plants & Oil Depots
- Exterior & Interior Thermal / Acoustical Insulation
- External Walls, Roofing, Partitions, Curtain Walls
- Fire Resistant Doors, Lifts, Safes, Cupboards

Product Range

Grade	Density	Max°C	Thick. (mm)	λ @40°C
WRRB 48	48	750	50–200	0.039
WRRB 64	64	750	40–150	0.038
WRRB 80	80	750	25–150	0.038
WRRB 100	100	750	25–100	0.038
WRRB 128	128	750	25–100	0.038
WRRB 144	144	750	25–100	0.038
WRRB 160	160	750	25–75	0.038
WRRB 900	900	1000	1–25	0.08

Insulation System — Layered Cross-Section



50–55mm Wedge FSMP — 1000°C hot face to 60°C cold face

100mm Wedge FSMPMB

160–170mm CalSil W-LD1000

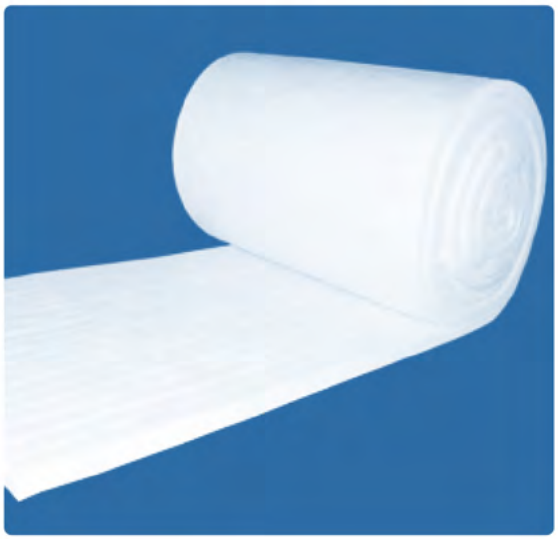
200–250mm Ceramic Fibre / MagSil / Vermiculite

Wedge Insulation Products — Most Effective Low Cost Insulation System

Wedge

WEDGE AlSi1260

Fire Resistant Aluminium Silicate Sheet



Wedge AlSi1260 Aluminium Silicate sheets are premier infill materials for increasing the fire resistance of fire doors. Manufactured from high-temperature resistant ceramic fibres through modern spinning, needling, and thermal forming processes, these materials are available as mattresses and semi-rigid boards, combining low heat storage with complete thermal shock resistance.

Features & Benefits

- High thermal shock resistance
- Suitable for Fire Doors & Fire Walls
- Excellent chemical stability
- High tensile strength
- Superior heat and fire resistance
- Low thermal conductivity
- Low shot content & heat storage

Applications

- Industrial Furnace Lining
- High Temperature Pipe Insulation
- Power Boiler & Nuclear Insulation
- Fire Wrap & Infill in Fire Doors
- Heat Resistant Sealing Gaskets
- Ceramics Kiln Thermal Insulation
- Fire Resistant Walls & Partitions
- Glass Tank Furnace Insulation
- High Temperature Filter Materials

Technical Data

Property	AlSi96 1260	AlSi98 1260	1430 ASZ Blanket
Al_2O_3 (%)	44	≥45	≥34
Al_2O_3+SiO_2 (%)	≥96	≥98	≥85
ZrO_2 (%)	–	–	≥15
Fe_2O_3+$RTiO_2$ (%)	1.0	≤0.5	≤0.5
K_2O+Na_2O (%)	1.0	≤0.2	≤0.2
Density (kg/m^3)	80/96/128	96/128/160	96/128/160
Classification Temp. (°C)	**1260**	**1260**	**1430**
Shot Content (%)	≤15	≤15	≤12
Fibre Diameter (µm)	3.5	3.5	3.5
λ @ 400°C	0.100/0.090/0.095	0.124/0.114/0.101	0.138/0.122/0.118
λ @ 500°C	0.122/0.119/0.123	0.145/0.135/0.120	0.179/0.153/0.145
Tensile Strength (MPa)	0.040/0.040/0.050	0.050/0.060/0.075	0.050/0.060/0.075
Standard Sizes (mm)	L × W: 14400 / 7200 / 3600 × 1220 / 610 · Thickness 6-60mm		
Certifications	ISO 9001-2008, ISO 14001-2004		

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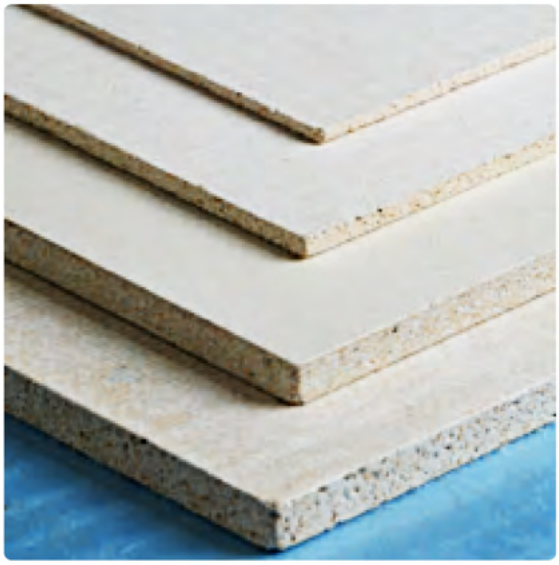
WEDGEMAG

High Strength Magnesium Sulphate MgO Board

FD240



WedgeMAG MgO Board is manufactured primarily from magnesium oxide, magnesium sulphate, perlite, and wood fibre. The material neither burns nor emits flammable vapours when heated to approximately 800°C and does not spread flames or smoke. It offers an exceptional combination of fire resistance, structural strength, and longevity with a 50-year warranty.

- Chloride-free — no corrosion / expansion
- Fireproof, waterproof, shockproof, non-toxic
- Does not rot, crack, or deform
- Non-combustible, high strength, lightweight
- 50-year warranty service life
- No asbestos or formaldehyde

Fire Doors | Walls, Partitions & Ceilings | Decorative Applications | Sub-Roof Boards | Floor & Wall Tiling Underlay

Technical Properties

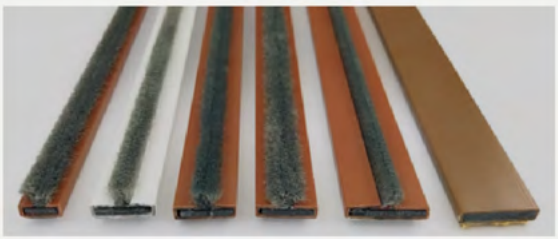
Property	Standard	Value
Base Materials	–	MgO, $MgSO_4$, Perlite
Thickness (mm)	–	4–20
Standard Size (mm)	–	2440 × 1220
Short-Term Temp. (°C)	–	1400
Long-Term Temp. (°C)	–	1200
Frost Resistance (°C)	–	-20
Density (kg/m^3)	EN 12467	Min. 1050
Fire Rating (minutes)	–	**240**
Reaction to Fire	EN 13501-1	**A1**
Acoustic Insulation (dB)	–	43
Impact Shock (kJ/m^2)	ASTM D5328	6
Compressive Strength (MPa)	–	18
Bending – Dry (MPa)	EN 12467	16
Bending – Wet (MPa)	–	13

Property	Standard	Value
Screw Pull-out (N)	–	1480
Moisture Content (%)	–	6.5–8.9
Freeze-Thaw Cycles	EN 12467	50
Moisture Movement (%)	ASTM C1185	0.18
Water Absorption (%)	ASTM C1185	10
Thermal Conductivity	EN 12667	0.186
Thermal Resistance	EN 12667	0.065
Dry Shrinkage (max %)	ASTM C1186	0.2
Wet Expansion (max %)	ASTM C1186	0.1
Warranty (years)	–	**50**
MgO Content (%)	–	50–60
$MgSO_4$ Content (%)	–	25–30
$MgCl_2$	–	None
Mould & Mildew	ASTM D3273	No Growth
Width / Thick. Tol. (mm)	EN 12467	±2 / ±0.2

Wedge

WEDGE INTUR

Rigid Intumescent Fire Seal Strips



Wedge INTUR Rigid Intumescent Fire Seal Strips are engineered for demanding applications where regular door maintenance is not possible. The PVC covering protects the graphite intumescent core from mechanical damage. In the event of fire, the INTUR seal expands multiple times its original volume to form a complete barrier against fire, smoke, and hot gases around door edges and joints. All seals are tested to BS 476 Part 22 & 31.1 (fire ratings 30–120 minutes) and EN1634-3 (smoke seals to 100,000 open/close cycles).

01 Fire Protection Only

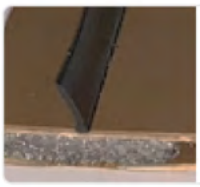
Fire door assemblies where smoke is not a concern.

Self-adhesive · 2.1m / 1.05m · 30–120 min
4mm thick · 10–25mm wide

02 Fire & Smoke + Brush Seal

Dual protection against fire and smoke.

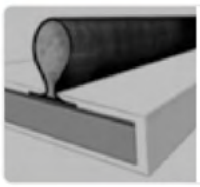
Self-adhesive · 2.1m / 1.05m · 30–120 min
4mm thick · 10–25mm wide



03 Fire & Smoke + Neoprene Blade

Single or twin blade neoprene option.

Self-adhesive · 2.1m / 1.05m · 30–120 min
4mm thick · 10–25mm wide



04 Fire, Smoke, Acoustic & Weather

Complete four-way protection solution.

Self-adhesive · 2.1m / 1.05m · 30–120 min
4mm thick · 10–25mm wide

Technical Properties

PROPERTY	SPECIFICATION
Base Materials	Intumescent Graphite
Covering Material	PVC (colours to specification)
Type	Rigid with Self-Adhesive
Colours	Brown, Red, Black, White, Grey
Lengths (m)	2.1 / 1.05
Widths (mm)	10 / 15 / 20 / 25
Thickness (mm)	4
Activation Temperature (°C)	180–200
Fire Ratings (minutes)	**30, 60, 90, 120**

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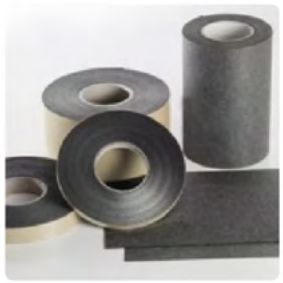
WEDGE INTUF

Flexible Intumescent Fire Seal Strips & Sheet

Wedge INTUF is a rubber-free, zero-halogen intumescent fire seal that expands 20 to 60 times its original volume upon exposure to fire, without generating harmful or toxic gases. Available in strips and large-format sheets, INTUF is highly flexible — allowing wrapping and folding to suit virtually any application — yet produces an excellent char structure to maintain fire integrity throughout the event.



Features & Benefits

- Zero halogen — no toxic smoke
- 20–60× free expansion @ 400°C
- Strips (2.1m / 1m) & sheets (2100×1000mm)
- Fire ratings: 30 to 120 minutes
- 30-year guarantee
- Rubber-free formulation
- Excellent char structure for integrity
- Self-adhesive option available
- Thickness 0.5mm to 2.5mm

Applications

- Wooden Fire Door Assemblies
- Intumescent Hinge Pad Seals
- General Gap Sealing & Gasketing
- PVC-Covered Rigid Strips
- Hardware & Ironmongery Protection
- Glazing Seals
- Damper Seals

Technical Properties

PROPERTY	SPECIFICATION
Base Materials	Zero Halogen & Rubber-Free Intumescent Graphite Laminate
Covering Material	Without covering or PVC in colours as desired
Type	With or without Self-Adhesive
Colours	Dark Grey
Lengths (m)	2.1 / 1.0
Widths (mm)	10, 15, 20, 25, 30, 40, 50, 60, 80, 100, 500
Thicknesses (mm)	0.5 / 1.0 / 1.3 / 1.8 / 2.0 / 2.1 / 2.5
Density (kg/m^3)	750–800
Activation Temperature (°C)	180–200
Free Expansion Ratio @ 400°C	20:1
Fire Ratings (minutes)	**30, 60, 90, 120**
Guarantee Life (years)	30

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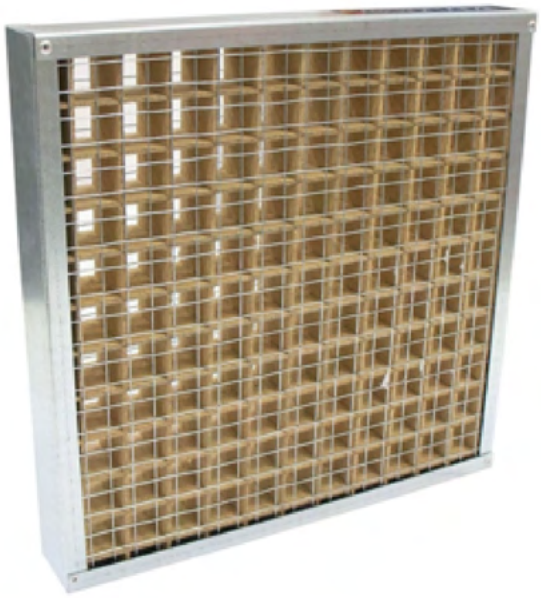
WEDGE INTUF102B

Air Transfer Fire Grilles

INTUF102B is a rigid intumescent material with good pressure generation and mid-range free expansion performance. It is most commonly used as the intumescent core within air transfer grilles, maintaining fire compartmentation in timber fire doors while permitting ventilation airflow under normal conditions.

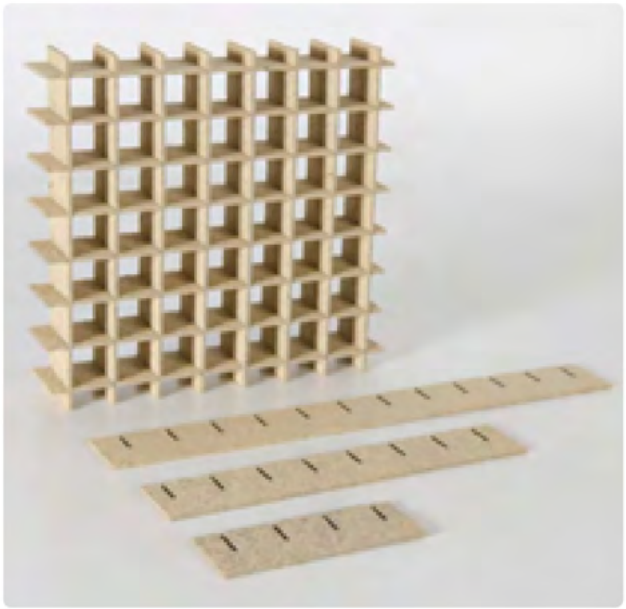


Features

- Good pressure generation performance
- Mid-range free expansion (17:1 ratio)
- Extremely stable char structure during fire
- With or without self-adhesive or PVC coating
- Full sheets or slit / slotted to custom dimensions

Applications

- Air Transfer Fire Grilles
- Ironmongery Protection
- Door & Glazing Applications
- General Gap Sealing



Standard Dimensions

DIMENSION	VALUE
Length (mm)	2150
Width (mm)	1050
Thickness – Plain (mm)	2.3
Thickness – Self-Adhesive (mm)	2.6
Thickness – PVC Coating SA (mm)	2.9

Technical Specifications

PROPERTY	VALUE
Density (kg/m^3)	900
Tensile Strength (MPa)	3
Free Expansion Ratio	17:1
Activation Temperature (°C)	180
Max. Pressure Generation (bar)	14.0
Typical Working Life (years)	60
Third Party Approval (AbZ)	Z-19.11-1033

Wedge

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Certified fire protection solutions engineered for international standards

TESTED & CERTIFIED TO INTERNATIONAL STANDARDS

EXOVA | BRE | UL | CERTIFIRE | CE | ASFP | FSRG