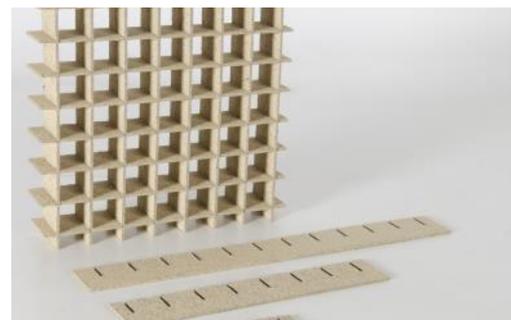


# TENMAT

**FIRE PROTECTION SOLUTIONS**



## VENTILATION

FIRE STOPPING SOLUTIONS



2019

# VENTILATION

When voids are made through fire rated walls, floors, or ceilings, for installation of ventilation service penetrations, the integrity or the structure is compromised.

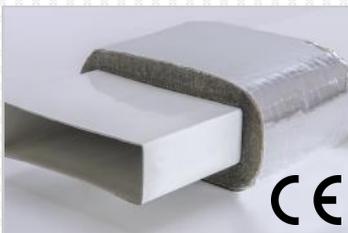
**TENMAT** manufactures innovative Passive Fire Protection solutions for Ventilation/Mechanical Service Penetrations, such as ducting and ceiling air valves. The range of products utilise **TENMAT**'s advanced intumescent materials, that rapidly expand upon exposure to fire, sealing the penetration to prevent the spread of fire, smoke, and hot gases, and reinstating the fire rating of the structure.



## **FF109+ Vent Duct Fire Sleeve LP**

CE Marked Low Profile Fire Sleeve for PVC Ducting  
Up to 120 minutes fire rating

**More Information on Page 3-4**



## **FF109 Vent Duct Fire Sleeve**

CE Marked Fire Sleeve for PVC Ducting  
Up to 120 minutes fire rating

**More Information on Page 5**



## **Vent Duct Wrap**

Intumescent Wrap for PVC Ducting  
Up to 120 minutes fire rating

**More Information on Page 6**



## **Fire Rated Ceiling Air Valve**

Fire Rated Supply and Extract Valves for Ceilings  
Up to 60 minutes fire rating

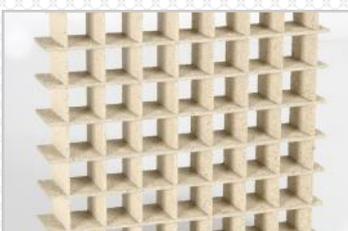
**More Information on Page 7-8**



## **Vent Duct Oversleeve for Semi-Rigid Ducting**

Intumescent Sleeve for Semi-Rigid Ducting  
Up to 120 minutes fire rating

**More Information on Page 9**



## **FF102B Air Transfer Grille**

Intumescent Air Transfer Grille material  
Up to 60 minutes fire rating

**More Information on Page 10**

# Test Data

**TENMAT**'s full range of Passive Fire Protection products for fire stopping ventilation service penetrations are third party fire tested and CE Marked where applicable fire test standards such as BS EN 1366-3, BS EN 1365-2, and BS 476. We test our products in a wide range of applications to cover both common and uncommon construction methods.

## FF109+ Vent Duct Fire Sleeve LP

Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
CE Certificate	Exova BM Trada	1224-CPR-0341	Plasterboard, Concrete walls	CE Approved
European Technical Approval	Exova BM Trada	ETA 12/0332	Plasterboard, Concrete walls	EI120
Classification	Exova Warringtonfire	CR13219 Rev A	Plasterboard	EI120
Fire Test	Exova Warringtonfire	BMT/FER/F13219	Plasterboard	EI120
Fire Test	Exova Warringtonfire	BMT/FEI/F15040	Plasterboard	EI120
Assessment	IFC Group	PAR/14600/01	Plasterboard	30-120
Assessment	IFC Group	PAR/15162/01	Ablative Coated Fire Batt	60-120
Aus/NZ Assessment	Exova Warringtonfire	33654700.2	Plasterboard, Concrete walls	60-120

## FF109 Vent Duct Fire Sleeve

Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
CE Certificate	Exova BM Trada	1224-CPR-0341	Various	CE Approved
European Technical Approval	Exova BM Trada	ETA 12/0332	Plasterboard, Concrete walls	EI120
Fire Test	Exova Warringtonfire	IF05044	Plasterboard	60-90
Fire Test	Exova Warringtonfire	IF05055	Plasterboard	90-120
Fire Test	Exova Warringtonfire	IF06016	Concrete/Plasterboard Floor	120
Fire Test	Exova Warringtonfire	IF09045 Rev A	Concrete/Blockwork	240
Fire Test	Exova Warringtonfire	IF10066	Plasterboard	30
Fire Test	Exova Warringtonfire	RF10167	Plasterboard	EI120
Fire Test	Exova Warringtonfire	IF11007	Plasterboard	120
Fire Test	Exova Warringtonfire	RF12096	Plasterboard	EI30-60
Aus/NZ Assessment	Exova Warringtonfire	33654700.2	Plasterboard, Concrete, Floor	60-120
Assessment	Chiltern Fire	A03187 Rev F	Mineral Fibre Batt, Concrete/Blockwork floor, Plasterboard,	120
Assessment	Chiltern Fire	A10184	Plasterboard	30
Assessment	IFC Group	PAR/11078/01 - Rev A	Plasterboard, Multiple Ducts	30-120
Assessment	IFC Group	PAR/13814/02	Ablative Coated Fire Batt	30-120

For test data of products not listed here, please see the individual product pages for further details.

# FF109+ Vent Duct Fire Sleeve LP

## Key Features:

- 120 minutes Fire Rated
- CE Marked
- Low Profile design
- No metal sleeving or boxing out required
- Approved for plasterboard partitions and ablative coated fire batts



**TENMAT's** *FIREFLY* 109+ Vent Duct Fire Sleeve LPs (Low Profile) provide up to 120 minutes' fire resistance to all common PVC ventilation ducts. The Low Profile Vent Duct Fire Sleeves offer industry leading fire performance with low material thickness through the use of **TENMAT's** expertise in high expansion intumescent technology.

The low profile design allows tight fitting against the ceiling soffit without the need to remove the top edge, aided by the compressible nature of the *FIREFLY* 109 intumescent material.

The product can be slit to allow retro fitting over duct work and the unique vacuum formed shape ensures that the product expands and seals the ducting in the event of a fire without the need for any additional metal cage or sleeving.

## Product Dimensions

Duct Size	Nominal Thickness	Nominal External Width/Diameter	Nominal External Height	Length	Fire Rating
204x60 mm	10-15 mm	228 mm	89 mm	180 mm*	Up to EI120
220x90 mm	10-15 mm	244 mm	124 mm	180 mm*	Up to EI120
110x54 mm	10-15 mm	134 mm	83 mm	180 mm*	Up to EI120
100 mm (103 mm)	15 mm	134 mm	-	180 mm	Up to EI120
125 mm (127 mm)	15 mm	160 mm	-	280 mm	Up to EI120
150 mm (155 mm)	20 mm	200 mm	-	280 mm	Up to EI120

All dimensions given are nominal. To ensure required friction fit within the substrate, the Sleeve should be measured on site before cutting holes. \* For longer lengths, please contact **TENMAT**

## Examples of Applications & Approvals

### Independently Third Party Assessed:

#### 30 Minute Partitions

- Single Board from 72 mm upwards

#### 60 Minute Partitions

- Single & Double Board Systems
- Single Layer Ablative Coated Fire Batt

#### 120 Minute Partitions

- Double Board Systems
- Double Layer Ablative Coated Fire Batt

#### Multiple Duct Penetrations

- Up to 3No. side by side ducts
- Up to 2No. stacked ducts
- Mixed Sizes

### CE Mark Approved:

3rd Party Assessed and Audited

### BS EN 1366-3 Fire Tested

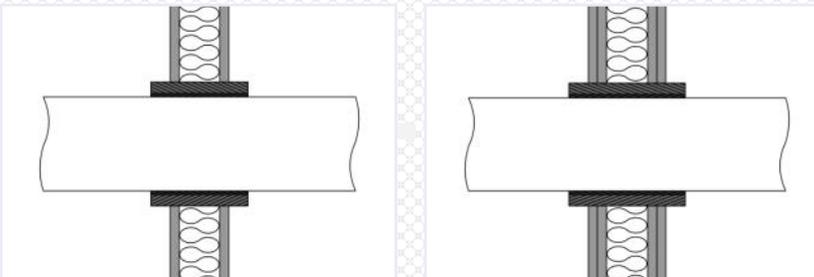
Uncapped/Uncapped tested as required for ventilation systems

**Fire Tested & Assessed for all common sizes of ducting**

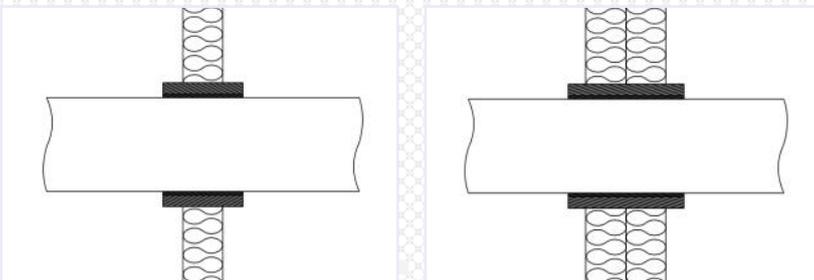
## Example Approved Applications

For details of further applications please contact **TENMAT**.

**TENMAT**'s Vent Duct Fire Sleeve LP is approved for a wide range of applications, outlined on page 3. All details for approved applications can be seen in the ETA and/or assessment reports, which are available to download from our website.



Single or double layer plasterboard. Approved with or without cavity insulation for all duct sizes listed



Multiple duct penetrations, including side by side and stacked, approved for partitions and fire batt applications (rectangular ducting only)

## General Fitting Instructions

For detailed fitting instructions for various applications please contact **TENMAT**.



- Installation requirements detailed in fire test evidence must be followed in addition to below:
- Use the Fire Sleeve as a template when cutting the plasterboard to provide a snug fit around the Fire Sleeve
- Make a slit along sleeve length to allow fitting around pre-installed ducts



- Fit sleeve around duct
- Slit should be resealed with Aluminium Foil Repair Tape provided
- Slide Fire Sleeve until central within wall

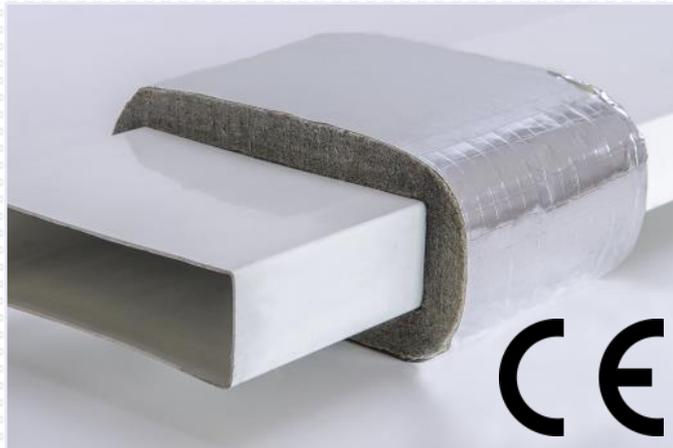


- The Fire Sleeve must protrude each side of the wall by min 25 mm (partitions)/40 mm (single fire batts)/75 mm (for 125 and 150 mm ducts)
- Plasterboard should be a snug fit, however any gaps (up to 5mm) should be sealed with intumescent sealant

# FF109 Vent Duct Fire Sleeve

## Key Features:

- Up to EI120 Fire Rating
- CE Marked
- Can be retrofitted
- No metal sleeving required
- Assessed for installation in walls and floors\*
- Can accommodate deflection



\*For approved applications through floors please contact TENMAT.

**TENMAT**'s FF109 CE Marked Vent Duct Fire Sleeves provide 30 minutes, 1 hour, 2 hours and in certain applications up to 4 hours Fire Resistance to rectangular PVC vent duct penetrations, and are suitable for all common sizes of vent duct.

The compressible 25-30 mm thick material offers excellent fire performance combined with accommodation for deflection. The Sleeves do not require any additional metal sleeving and are held in place by the plasterboard/batt only. The unique intumescent material is vacuum formed to shape which ensures controlled sealing of the duct. In addition, the material swells externally to provide a fire and smoke seal around the sleeve.

The Fire Sleeves have been full scale fire tested to EN 1366-3:2009 & BS 476. The EN fire testing included all ducts tested with Uncapped/Uncapped (U/U) duct end configuration as required for ventilation ducts. The European Technical Approval (ETA-12/0332) and EC Certificate 1224-CPR-0341 enables the range to be CE Marked and used throughout the EU.

## Product Dimensions

Duct Size	Nominal Thickness	Nominal External Width/Diameter	Nominal External Height	Length	Fire Rating
204x60 mm	25 mm	254 mm	110 mm	180 mm	Up to EI120
220x90 mm	30 mm	270 mm	150 mm	180 mm	Up to EI160
110x54 mm	25 mm	160 mm	104 mm	180 mm	Up to EI120
234x29 mm	25 mm	284 mm	79 mm	180 mm	Up to EI120
308x29 mm	25 mm	358 mm	79 mm	180 mm	Up to EI120
100 mm (103 mm)	30 mm	164 mm	-	150 mm	Up to EI120
125 mm (127 mm)	30 mm	190 mm	-	280 mm	Up to EI120
150 mm (155 mm)	35 mm	222 mm	-	180 mm	Up to EI120

All dimensions given are nominal. To ensure required friction fit within the substrate, the Sleeve should be measured on site before cutting holes.

## General Fitting Instructions

For detailed fitting instructions for various applications please contact **TENMAT**.

Please see FF109+ Vent Duct Fire Sleeve LP for similar Fitting Instructions on page 4.

# Vent Duct Wrap



## Key Features:

- EI120 Fire Rating
- Simple to install
- Low profile design
- High expansion intumescent material
- Only one wrap per penetration

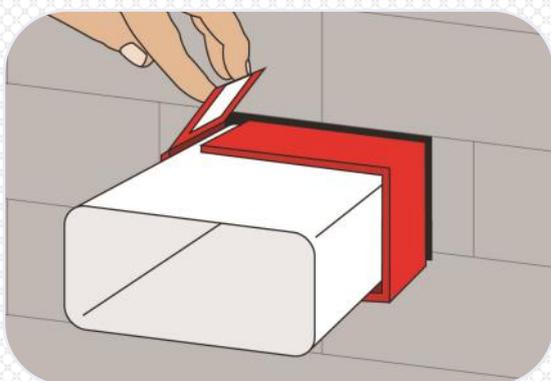
## Product Dimensions

All Vent Duct Fire Wraps are 100 mm wide.

Duct Size	
110x54 mm	215x25 mm
150x70 mm	234x29 mm
180x90 mm	308x29 mm
204x60 mm	

**TENMAT's** Vent Duct Fire Wraps provide up to 2 hours Fire Resistance to rectangular PVC ventilation ducting penetrations. The Vent Duct Fire Wraps have been fire tested to the most onerous requirements of EN 1366-3, the ducts having been tested in an uncapped/uncapped pipe/duct end configuration.

The Vent Duct Fire Wraps are suitable for penetrations through plasterboard partitions only when fitted within a galvanised steel outer sleeve.



The Fire Wraps are easily wrapped around the vent duct due to the four segment design and slid into the wall construction. In a fire situation the high expansion intumescent material will rapidly expand to effectively seal off the vent duct to prevent the passage of fire and hot gases.

## Test Data

Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
Fire Test	Chiltern Fire	RF10167	Plasterboard	120

# Fire Rated Ceiling Air Valve

## Key Features:

- Extract and Supply versions
- 60 minutes Fire Rating
- No maintenance required
- Meets requirements of Approved Document B
- Simple to install



Left: Extract Valve      Right: Supply Valve

The **TENMAT** FIREFLY Fire Rated Ceiling Air Valves are a unique and cost effective fire rated solution where recessed ceiling air valves are to be installed in fire rated ceilings. In a fire situation, the integral intumescent material rapidly expands to seal off the air valve and reinstate the fire resistance rating of the ceiling. This limits the risk of fire and heat spread throughout the building. The **TENMAT** Ceiling Air Valves are available in all sizes for both Extract and Supply.



Intumescent Disc

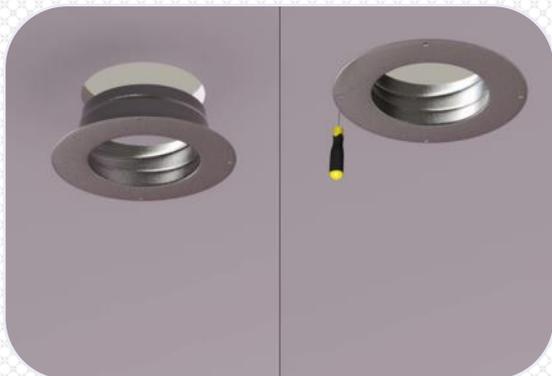
The Fire Rated Ceiling Air Valve is installed as normal with air flow through the air valve unaffected. The product requires no maintenance after installation. The Fire Rated Ceiling Air Valves is suitable for domestic homes, as well as apartments, hotels and other multiple occupancy buildings where fire ratings exist .

## Product Dimensions

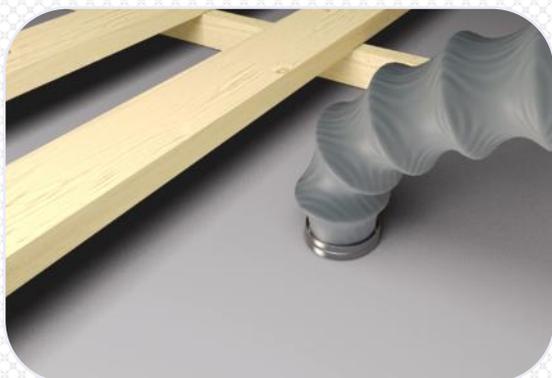
Extract (Ø)	Supply (Ø)
80 mm	80 mm
100 mm	100 mm
125 mm	125 mm
150 mm	150 mm
200 mm	200 mm



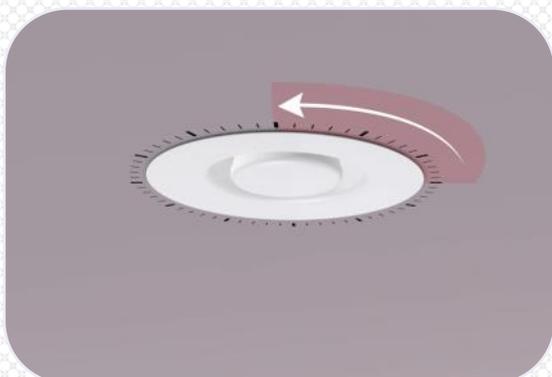
## Fitting Instructions



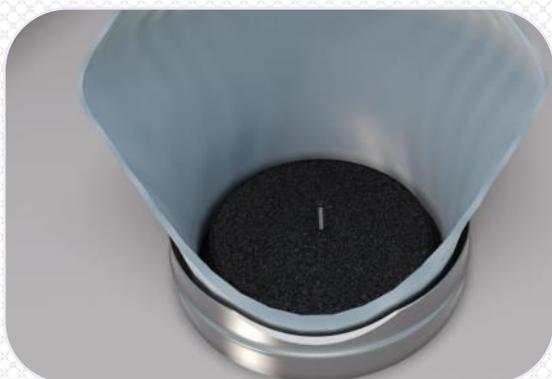
- Cut hole in ceiling to suit the outside diameter of the air valve mounting ring
- Fix the air valve to the ceiling via the screw holes in the valve



- Attach ducting onto the air valve mounting ring



- Fit the body of the valve into the mounting ring with a quarter turn twist
- Set inner cone clearance to provide required air flow rate (max. 12 mm)



- Ensure the air valve is fitted snugly within the ceiling with no gaps or voids
- The penetration is then sealed against the spread of fire and the fire rating of the ceiling construction is maintained.

## Test Data

Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
Fire Test	The Building Test Centre	BTC 18074F	Timber Joist/GTEC Fire Board Floor	60
Fire Test	Chiltern Fire	IF10090	Plasterboard	60

# Vent Duct OverSleeve



## Key Features:

- EI120 Fire Rating
- Can be retrofitted
- Low Profile
- Highly flexible for easy installation
- Only one layer required

**TENMAT's** Vent Duct OverSleeve offers 120 Minutes Fire Rating to Semi Rigid Ducting. The low profile (4 mm thick) OverSleeve is supplied flat and simply wrapped around the ducting and resealed with the reinforced foil backing layer. Its design allows the product to be retrofitted.

**TENMAT's** Vent Duct OverSleeve has been

independently tested in accordance with EN1366-3 and achieves a fire resistance classification of EI120 (according to EN13501). This means that the product is able to prevent the spread of fire for 120 minutes. It was tested in partition walls without additional metal sleeving.

## Product Dimensions

Duct Size	Thickness	Width	Length
75 mm (Ø)	4 mm	260 mm	250 mm

All dimensions given are nominal. To ensure required friction fit within the substrate, the Sleeve should be measured on site before cutting holes.

## Fitting Instructions

- Simply wrap sleeve flush around the duct, peel back backing tape, and press adhesive to the wrap to seal
- Cut 86 mm diameter hole in partition, & slide duct with OverSleeve into partition
- Seal edges with intumescent sealant
- Ensure OverSleeve protrudes minimum 50 mm on both sides of partition

## Test Data

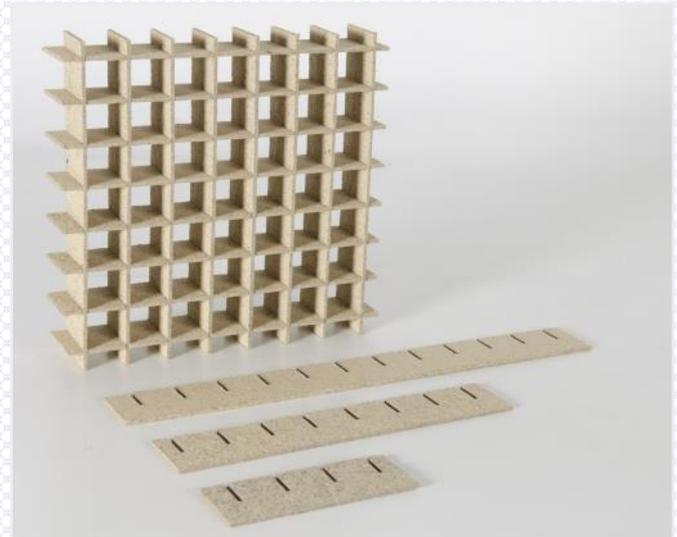
Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
Fire Test	Chiltern	RF13219	Plasterboard	120
Assessment	IFC Group	PAR 1643401	Plasterboard	30 - 60

# FF102B Air Transfer Grille

## Key Features:

- 60 minutes integrity fire rating
- 30 minutes insulation fire rating
- Excellent air flow
- Highly cost effective

**TENMAT's** FF102B Air Transfer Fire Grille matrix maintains ventilation within a building whilst also maintaining the fire rating of fire resistant elements (fire doors) for up to 1 hour fire



resistance. The FF102B Air Transfer Fire Grilles have been tested in accordance with the general requirements of EN1634-2.

The FF102B Air Transfer Grille Material is supplied in 2.3 mm thick x 38 mm wide strips which are pre-slotted to allow simple assembly into an Air Grille Matrix. When assembled the intumescent core offers 25 x 25 mm openings to provide high air flow and limit blockages. The intumescent core can then be fitted into a steel frame with wire mesh to form finished Air Transfer Grilles.

## Product Dimensions

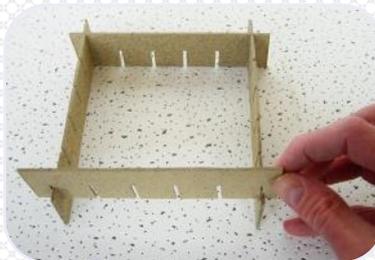
Thickness: 2.3 mm  
Width: 38 mm

### Strip Lengths Available

72 mm	347 mm
97 mm	397 mm
147 mm	447 mm
197 mm	497 mm
222 mm	547 mm
247 mm	597 mm
297 mm	1000 mm

Please contact **TENMAT** for steel frame and mesh specifications, or to check suitability for specific applications.

## Assembly Instructions



- Start by assembling the four side pieces
- Slot the remaining pieces on one side



- Slot in the final pieces from the opposite side
- The assembled Air Transfer Grille material can then be fitted into a steel frame.

## Test Data

Report Type	Fire Test Lab	Report Number	Construction	Fire Rating
Fire Test	Chiltern Fire	IF05088	Fire Door	30-60



**FEROFORM** **RAILKO** **FEROGLIDE** **FEROBIDE**

**REFRAVER** **REFEL** **ARCLEX**

**FIREFLY**

**NITRASIL**

**FERO SAFE**

**TENMAT** is committed to the highest standards in customer service and our international staff is looking forward to assist you.

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