

Partel 

**IZOPERM FR  
PLUS**



**EUROCLASS  
A2-S1, D0**

**PERFORMANCE-BASED  
FIRE PROTECTION  
FOR LOW-ENERGY  
BUILDINGS**

**IZOPERM FR  
PLUS**

REACTION TO FIRE  
A2 - S1, D0

SAFE AND DURABLE  
VAPOUR CONTROL  
LAYER



**Partel**  
The Best of Building

# THE NEED FOR FIRE SAFETY DESIGN AND PROTECTION IN INTERNAL STRUCTURES

**STRUCTURAL FIRE SAFETY SHOULD BE AT THE FRONT END OF THE DESIGN PROCESS WHEN BUILDING AND RENOVATING SUSTAINABLE BUILDINGS.**

To minimise the risks of hazards, structural fire safety requires holistic and technical approaches from preventing the start of any fire to containing and extinguishing it. The risk of internal fire spread can be greatly inhibited by choosing non-combustible, flame-retardant materials installed in internal walls and ceilings.

**Airtightness and insulation represent a second important factor affecting fire development in energy-efficient structures.** The choice of materials for air tightening the building envelope can significantly impact the spread of a fire, and its rate of growth, even though they are not likely to be the materials first ignited.

This is particularly important in public buildings such as commercial buildings, schools, hospitals, nursing or retirement homes with a large number of visitors or occupants, and where rapid spread would be most likely to prevent occupants from escaping.

**IZOPERM PLUS FR** fire-resistant system designed by Partel is developed to ensure the highest protection against structural damage, cost savings, and help save lives.





# IZOPERM PLUS FR SECURES MAXIMUM FIRE PROTECTION IN THE BUILDING STRUCTURE



**IZOPERM PLUS FR** product system is a non-combustible innovative solution that acts as a protective shield for the building envelope and prevents fire from spreading in the internal structure.

It is tested in accordance with EN 13501-1 and has a fire rating of A2-s1,d0.

Buildings that pose a higher risk for fire safety need high-performance measures and reliable passive fire protection.

**IZOPERM PLUS FR** system enhances the building fabric in terms of airtightness, energy efficiency and moisture management, providing exceptional fire safety to the building and its occupants.



## ECHOSEAL ALU FR

Non-combustible air and windtight adhesive tape



## IZOPERM PLUS FR

Non-combustible internal vapour control layer

# COMPLIANT SYSTEM WITH BUILDING REGULATIONS

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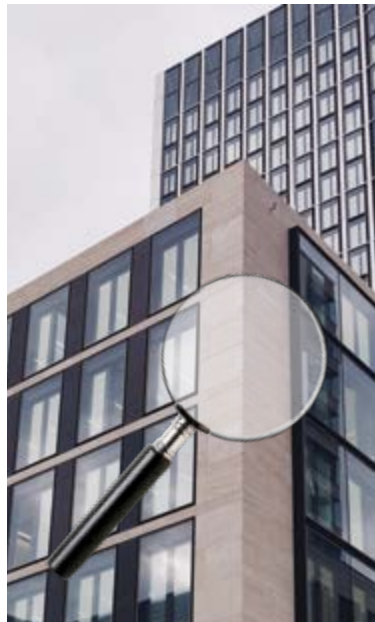
## FIRE SAFETY

To assess the fire safety of a structural assembly, building codes and standards use three main fire safety criteria as per function of a building element.

### These include:

1. Stability - the ability to withstand applied loads during fire exposure;
2. Integrity - the ability to prevent fire propagation due to formation of cracks and fissures;
3. Insulation - the ability to insulate the unexposed faces during fire exposure.

**IZOPERM PLUS FR** product system fully complies with the latest building Regulations covering fire safety issues within and around buildings for Ireland and the UK, specified in Approved Document B (Fire Safety).



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## AIRTIGHTNESS

Partel **IZOPERM PLUS FR** class A2 internal membrane meets the requirements of Ireland and England Building Regulations Approved Document L for permeability, airtightness, and condensation control.

Carrying out a comprehensive strategy and implementing compliant materials represent a safe measure in preventing the spread of fire and maximizing the airtightness in buildings.

# TESTED AND TRUSTED FIRE PERFORMANCE

**IZOPERM PLUS FIRE-RATED SYSTEM - MEMBRANE AND TAPE - HAS BEEN EXTENSIVELY TESTED IN ACCORDANCE WITH EN 13823 - SINGLE BURNING ITEM (SBI) TEST AND HAS SUCCESSFULLY RECEIVED THE CLASS A2-S1-D0 STANDARD IN ACCORDANCE WITH EN 13501-1.**

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**The Partel AVCL membrane has been proven non-combustible. It meets the requirements for lifetime performance in operation, across a wide spectrum of aspects, including sustainability and fire resiliency.**

**A2:** When the vapour control membrane is installed on the internal wall or ceiling using the ECHOSEAL ALU FR adhesive tape it provides an Euroclass A2 envelope when applying a quantity of 50 g/m<sup>2</sup> adhesive that covers a maximum of 10 % of the membrane surface.



**The class A2 of reaction to fire performance of the IZOPERM PLUS FR system is accompanied by additional classifications related to:**

**s1:** provides minimum smoke development if ignited by a fire; s1 being the highest performance.

**d0:** with no hot droplets/particles the chance of fire spread to other areas of a building is eliminated; d0 being the highest performance.



**FIRE CLASS**



**A2**  
EN 13501-1



**SMOKE EMISSION**



**S1**  
EN 13823



**HOT DROPLETS**



**D0**  
EN 13823

# FIRE PROTECTION, AIRTIGHTNESS, AND ENERGY EFFICIENCY

THE FIRE PROTECTION QUALITIES OF IZOPERM PLUS FR PRODUCTS NOT ONLY IMPROVE THE SAFETY OF BUILDINGS, BUT ALSO REDUCE ENERGY CONSUMPTION THROUGH PROPER MANAGEMENT OF WATER VAPOUR AND THERMAL PERFORMANCE.

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- ✔ **Very high level of fire safety** - Class A2-s1,d0, tested with Partel adhesive tape, meeting the standards of Euroclass EN13501-1
- ✔ **Non-combustible** components - Significantly improves the building longevity and fire protection
- ✔ **Ensures proper management of water vapour** - controls the condensation and conditions associated with moisture, maximizing energy efficiency
- ✔ The innovative technology used in design ensures superior aging resistance and dimensional stability
- ✔ The membrane withstands up to 600 °C with no deviation of material composition
- ✔ Weather resistant, breathable membrane
- ✔ **Superior airtightness**
- ✔ 0.05 Low emissivity/reflective surface for improved thermal performance
- ✔ **Resistant to water penetration** – W1 according to EN 1928
- ✔ **Safer emissions** – during a fire, it is lowering the risk of smoke inhalation
- ✔ The composite structure means it is far stronger than traditional polymeric membranes
- ✔ Meets low mechanical damage when compared with another wall membranes



# IZO PERM PLUS FR TECHNOLOGY

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**PARTEL HIGH-PERFORMANCE MEMBRANE AND TAPE USES AN INNOVATIVE TECHNOLOGY ENGINEERED AND MANUFACTURED BASED ON LACQUERED ALUMINIUM LAMINATED WITH STRONG GLASS FIBRE.**

Both aluminium and glass fibre are non-combustible, ensuring that the vapor control layer has excellent fire resistance.

This specific composition ensures superior structural stability and durability, along with high resistance to mechanical stress – which results in increased building longevity and performance.



# APPLICATIONS

**IZOPERM PLSU FR SYSTEM ENSURES FIRE SAFETY FOR CONSTRUCTION ASSETS AND PEOPLE. IT CAN BE USED IN WALLS AND CEILING AS AN AIRTIGHT MEMBRANE, PREVENTING HEAT RADIATION AND MOISTURE TRANSFER.**

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Thanks to its non-combustible core feature, the Partel IZOPERM PLUS FR Class A2 system is ideal as an internal vapour barrier in high-risk buildings such as hospitals, shopping centres, hotels, restaurants, universities, public buildings and multi storey buildings. In warmer countries, the vapour control membrane can be used externally as protective sheathing in high-rise buildings.



- ✔ Wall and ceiling
- ✔ Residential and commercial buildings
- ✔ Compatible with all insulation types
- ✔ Suitable for all building heights especially for high-rise and high-risk construction
- ✔ Complies with the most stringent project requirements

# WARRANTY - TAKE ADVANTAGE OF OUR RELIABLE PRODUCT SYSTEM

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**IZOPERM PLUS FR INTEGRATED SYSTEM SOLUTION COMES WITH A 20-YEAR WARRANTY AND UNCOMPROMISING QUALITY FROM PARTEL.**



Please review the Partel's warranty details for terms and conditions.

## QUICK AND SAFE INSTALLATION

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**THE IZOPERM PLUS FR SYSTEM OF MEMBRANE AND ADHESIVE TAPE ARE PERFECTLY MATCHED TO EACH OTHER.**

Correct installation of **IZOPERM PLUS FR** on the internal wall and ceiling will radically improve the structural fire safety in buildings, while controlling the water vapour for active moisture management.

Check Partel's YouTube channel for best practices and installation tips.



**WATCH VIDEO**

# TECHNICAL DATA

Partel 

**IZOPERM™ FR**  
**PLUS**

<b>WEIGHT</b>	<b>EN 1849-2</b>	<b>165 G/M<sup>2</sup> (35%)</b>
<b>DIMENSIONS</b>		<b>1.5M X 50M=75M<sup>2</sup></b> <b>59-1/16" X 164'-1/2" = 807 SF</b>
<b>COLOUR</b>		<b>SILVER</b>
<b>THICKNESS</b>	<b>EN 1849-2</b>	<b>148 μM</b>
<b>SD VALUE</b>	<b>EN 1931</b>	<b>2000 M</b>
<b>REACTION TO FIRE</b>	<b>EN 13501-1</b>	<b>A2—S1, D0</b>
<b>WATER RESISTANCE</b>	<b>EN 1928</b>	<b>W1</b>
<b>EMISSIVITY</b>	<b>EN 15956</b>	<b>≥ 0.05</b>
<b>TENSILE STRENGTH MD/CD*</b>	<b>EN 12311-1 MOD. WITH</b> <b>EN 13859-1:2010</b>	<b>800 / 800 N/50MM</b>
<b>ELONGATION MD/CD*</b>	<b>EN 13859</b>	<b>4 / 4%</b>
<b>NAIL TEAR RESISTANCE</b>	<b>EN 12310-1</b>	<b>170 / 150 N</b>
<b>VAPOUR PERMEANCE</b>	<b>ASTM E96</b>	<b>0.00</b>
<b>SURFACE BURNING</b>	<b>ASTM E96</b>	<b>CLASS A</b>
<b>CE LABELLING</b>	<b>EN 13984</b>	<b>AVAILABLE</b>

# TECHNICAL DATA

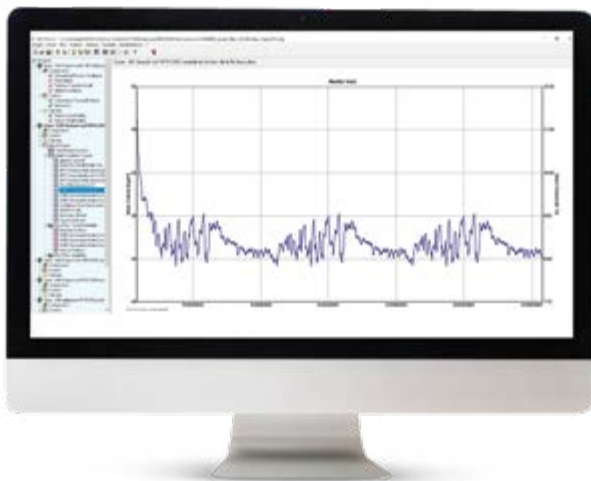


CARRIER		ALUMINIUM TAPE
DIMENSIONS		75MM X 50 M
COLOUR		BLACK, SILVER
ADHESIVE		FIRE-RATED ADHESIVE/ALU 30 µM MOISTURE RESISTANT
THICKNESS	EN 1849-2	160 (310%) µM
REACTION TO FIRE, SYSTEM WITH MAX 10% ADHESIVE	EN 13501-1	A2-S1, D0
REACTION TO FIRE, TAPE WITH 100% ADHESIVE	EN 13501-1	B
SD VALUE	EN 1931	> 1500 M
TENSILE STRENGTH MD/CD*	800/500 / N/50MM	EN 12311-1
ELONGATION MD/CD*	4 / 4%	EN 12311-1
NAIL TEAR RESISTANCE MD/ CD*	200 / 300 N	EN12310-1
WATER RESISTANCE	EN 1928	W1

# TECHNICAL SUPPORT AND SERVICE

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At Partel, we are committed to providing expert technical advice, supporting your project at every stage. We offer **WUFI® analysis** on request to ensure that the completed project is functioning correctly. All certificates, reports and technical documentations for IZOPERM PLUS FR are available on request and online. Please ask also for **IZOPERM PLUS FR** sample patch with full technical data, via e-mail at [sales@partel.com](mailto:sales@partel.com).



## CPD WEBINARS

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Partel offers a **CPD Webinar on-demand**, how to achieve maximum fire safety in building envelope design with IZOPERM PLUS FR and EXOPERM MONO membranes, especially for high-rise and high-risk buildings.

To request a live CPD seminar, please send an e-mail to [technical@partel.com](mailto:technical@partel.com) with your preferred date and time or have a look at our website with current CPDs list.

# COMPLEMENTARY BUILDING COMPONENTS FOR EXTERNAL USE

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**EXOPERM™ 200**  
**MONO DURO**

**MONOLITHIC FIRE-RESISTANT  
MEMBRANE**

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**ECHOSEAL™**  
**FOIL**

**REFLECTIVE NON-COMBUSTIBLE  
AIRTIGHT TAPE**

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**ACRABOND™**  
**LIQUID**

**LIQUID ADHESIVE FOR AIRTIGHT  
CONNECTIONS**



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