



Passive Fire Protection





PASSIVE FIRE PROTECTION

Protects Occupants & Building
Structure during Emergencies...



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MAGNESIUM BOARDS

Corporate Profile



A Complete Flow Control Solution Provider

- **Passive Fire**
- **Piping System**
- **Smoke Management & Ventilation**
- **Valves Solution**

NAFFCO Flow Control provides a complete solution for Passive Fire on construction projects, along with the customized system design and supply for the unique projects.

Since its inception, NAFFCO Flow Control has been continuously striving through its research and development to find out the ever-changing needs of the market and cater to the same, with the help of its carefully selected vendors. The product portfolio offers a wide, unique & exclusive range of innovative, efficient and eco-friendly products.

We are committed to providing the highest quality products and solution to building structures.



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"What's measured improves!"



Corporate Profile



A Complete Flow Control Solution Provider

COMMITMENT

We are committed to providing the highest quality products and solutions, therefore, we only supply globally recognised and approved products having UL, FM, Kitemark, LPCB, CE, WRAS, Applus certifications and more.

The product portfolio ranges from Passive Fire Protection to SHIELD's piping systems to the robust solution for the industrial ventilation, smoke management and more.

QUALITY

We always strive to better serve customers' needs by staying up-to-date with the latest approved product range. Our strength relies on our quality products, services and delivery of right solutions to address your project requirements.

We supply Innovative, Efficient and Eco-friendly products in compliance with various American and European standards.

REACH

With representation in the Middle East and North Africa (MENA) region, we are capable to deliver our products and services in a short period of time. We simultaneously work on opportunities to explore new markets.

We believe in total customer satisfaction hence providing qualified and well-experienced support team.

As a member of NAFFCO Group, our success is driven by our "Passion to Protect"; our vision is to become the world's number one provider of innovative solutions in protecting life, environment and property.

Supplying State-of-The-Art Products to Ensure High Efficiency



NOTE: Product Packaging designs are shown for illustration purpose only. Actual product, colour & size may vary due to product enhancement.

Passive Fire Protection



About Passive Fire Protection

INTRODUCTION

Passive Fire Protection (PFP) is a group of systems that compartmentalize a building through the use of fire-resistance rated walls/floors. Compartmentalizing your building into smaller sections helps to slow or prevent the spread of fire/smoke from one room to the next.

THE PURPOSE



Contain the growth and spread of fire within the building with the use of fire-rated walls and doors



Reduce the number of damages of the building inflicted by the fire



Delaying the collapse of the building structure



Reduce the possible life and health risks of the building occupants and the firefighters.



Therefore it provides the building with the strength to withstand fire for a certain period time, ensuring the safe evacuation of its occupants and safety of the building surrounding it

Fire Proofing



About Fire Proofing

INTRODUCTION

In a building fire, structural steel loses strength as the temperature increases. To maintain the structural integrity of the steel frame, several fireproofing measurements are taken.

Applying a certification listed fireproofing system to certain structures allows them to have a fire-resistance rating. The term "**fireproofing**" may be used in conjunction with standards. An item classed as fireproof is resistant in specified circumstances and may burn or be rendered inoperable by fire exceeding the intensity or duration that it is designed to withstand.



Fire Proofing Material



Types of Fire Proofing Products

CEMENTITIOUS COATING

Cementitious Fire Protection is a spray-applied using special equipment to protect structural steel or concrete from the effects of fire for a nominal fire resistance period. The cement-based fireproofing cementitious paint has excellent physical properties for interior/exterior uses.

The term that applies to cementitious means that the materials are mixed wet and pumped as a slurry mix. Due to its properties, cementitious fireproofing is spray applied to the substrate making it a quick and efficient application process.

Cementitious Coating can give up to 4 hours of fire protection.



NOTE: Refer to UL & Certifire certificates for more information.

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Fire Proofing Material



Types of Cementitious Coating Products

CEMENTITIOUS COATING PRODUCTS

Fire Rating:



NAFFCO PSV-C-1

SPECIFICATION

- ✓ Water-based.
- ✓ Interior/Exterior* Application.
- ✓ ANSI/UL 263 (ASTM E119).
- ✓ BS 476 Part 21:1987
- ✓ Fire resistance rating: R15 - R180

NAFFCO PSV-C-1 is used for the interior and exterior steel structures of buildings with excellent adhesion.

NAFFCO PSV-C-1 is formulated with materials such as cement, vermiculite, fibre (asbestos-free) and special inorganic fire protection materials, not only to keep the intensity of cement rigid & also with the tough characteristics of interlaced fibre like a net, its physical properties are better than the similar products available in the market.

Fire Rating:



NAFFCO PSV-C-2

SPECIFICATION

- ✓ Water-based.
- ✓ Interior/Exterior* Application.
- ✓ ANSI/UL 263 (ASTM E119).
- ✓ Fire resistance rating: R15 - R180

NAFFCO PSV-C-2 Spray-Applied Fire Resistive Material is used in building construction to have excellent adhesion on steel substrates.

NAFFCO PSV-C-2 is formulated with materials such as cement, vermiculite, fibre (asbestos-free) and some other organic and inorganic materials, where it does not only show the characteristic of steel strength of concrete, but also the toughness and flexibility of the cross-stitched network of fibre.

Fire Rating:



NAFFCO PSV-C-HC-100

SPECIFICATION

- ✓ Water-based.
- ✓ Exterior Application.
- ✓ Suitable for Hydrocarbon (Oil & Gas) Industry.
- ✓ ANSI/UL 263 (ASTM E119).
- ✓ Fire resistance rating: R15 - R180

NAFFCO PSV-C-HC-100 based on cement, vermiculite and special high chemical resistant fibre, and contains no asbestos. It is used on exterior and interior steel structures of the building. It has rigid and tough characteristics. It resists a rapidly rising temperature and polluted environment and has the best fire-resistive coating for petrochemicals plants and general industrial equipment.

*Subjected to appropriate weather conditions.



Fire Proofing Material



Types of Fire Proofing Products

INTUMESCENT PAINT

Intumescent mastic coating is fire retardants designs for both interior and exterior application to structural steel concrete and other construction materials.

The load-bearing capacity of steel decreases above 550°C. Beam loses its strength to the extent that the structure can suffer damage and if the worst happens the structure could collapse.

Our intumescent paint coating starts to swell about at 180-200°C and forms a foam layer which stops the critical heating of steel. It is available as water and solvent-based paint.

Intumescent Paint can give up to 3 hours of fire protection.



NOTE: Refer to Certifire certificate for more information.

Fire Proofing Material



Types of Intumescent Paint Products

INTUMESCENT PAINT PRODUCTS

NAFFCO PSV-ISW-180

Fire Rating:



SPECIFICATION

- ✓ Water-based.
- ✓ For indoor use /Refer to manufacturer for outdoor application.
- ✓ Approved according to BS 476, Certifire No. CF 5627 (refer to the test report for minimum required thickness)
- ✓ Fire resistance rating: R15 - R180
- ✓ Non-VOC, free from halogens, APEO, borates, fibres, silicones and plasticizers.



NAFFCO PSV-ISW-180 is a white thin film water-borne intumescent coating for the fire protection of internal structural steelwork in combination with suitable for the topcoat.

NAFFCO PSV-ISW-180 should apply onto a clean, undamaged, dry and primed steel surfaces only.

NAFFCO PSV-ISS-120

Fire Rating:



SPECIFICATION

- ✓ Solvent based.
- ✓ Approved according to BS 476, Certifire No. CF 5628 (refer to the test report for minimum required thickness)
- ✓ Fire resistance rating: R30 - R120
- ✓ Free from borates & silicones.



NAFFCO PSV-ISS-120 is a white single pack thin film coating that foams up under the effect of fire or heat (intumescent) to form an insulating layer.

Fire protection system for structural steel is available in two different grades for internal and external use.

*Subjected to appropriate weather conditions.

Cable Coating

About Cable Coating

INTRODUCTION



SPECIFICATION	NAFFCO PSV-PC
Colour	White
Volatile content	< 140g/l
Consumption	Dry film thickness: 500µm ≈ Consumption: 1kg/m ²

A universal applicable fire protection coating for indoor and outdoor use. Approved weather-resistant product for cable. Solvent-free and non-halogen, elastic, resistant to moisture, freeze-thaw, cycling, UV-light and several oils and chemical substances.

Tested and approved according to national and international standard as e.g: FM 3971.

Application possible with brush, paint roller or airless spraying machine.



NOTE: Refer to FM certificate for more information.



Fire Stopping

About Fire Stopping

INTRODUCTION

A fire-stop is a fire protection system made of various components used to seal openings and joints in fire resistance rated wall and/or floor assemblies includes compartmentalization of the overall building through the use of fire resistance rated walls and floors.

Organization into smaller fire compartments consisting of one or more rooms or floors prevents or slows the spread of fire from the room of fire origin to other building spaces, limiting building damage and providing more time to the building occupants for emergency evacuation or to reach an area of refuge.



Fire Stopping Material



Types of Fire Stopping Products

■ SEALANT

A universal applicable fire protection coating for indoor or outdoor use. Approved weather-resistant product for pipe or combined. Solvent-free and non halogen, elastic, resistant to moisture, freeze-thaw, cycling, UV-light and several oils and chemical substances.

Tested and approved according to national and international standard as e.g: FM and UL.



NAFFCO PSV-PC can give up to 4 hours of fire protection.

SPECIFICATION	NAFFCO PSV-PC
Colour	White
Volatile content	< 140g/l
Consumption	Dry film thickness: 500µm = Consumption: 1kg/m ²

■ WRAP STRIPS



Fire protection fabric used in various application thus as:

- Joint sealing system
- Wrap for cables, combustible pipes and non-combustible pipes with combustible insulation.

A flexible composite fibre glass fabric with grey external PU coating and internal anthracite-coloured intumescent coating. The product is flexible, weather resistant and resistant to UV radiation. When exposed to fire or extensive heat, it forms a microporous, thermally insulating layer of foam.

Tested and approved according to national and international standard as e.g: UL and EN.

SPECIFICATION	NAFFCO PSV-WR-S
Colour	Grey external/anthracite internal

Fire protection fabric used as pipe wrap for combustible pipes. A flexible fabric composite fibreglass reinforcement with intumescent coating on both sides. When exposed to heat or fire it forms a microporous, heat-insulating foam on the side, which fills the space between the building component and the fabric thus limiting the spread of fire.

Tested and approved according to national and international standard as e.g: UL and EN.

SPECIFICATION	NAFFCO PSV-WR-B
Colour	Red/anthracite internal Both sides can be used towards combustible pipes

NOTE: Refer to UL & FM certificates for more information.

Fire Stopping Material

Types of Fire Stopping Products

■ MORTARS

Fire protection mortar applicable for approved fire penetration sealing systems in massive walls and floors with cables, pipes or combine penetrations.

One component, hydraulically hardening; applied by spraying, pressing and manual installation; free from fibres, phenols and halogens, ageing resistant.

Tested and approved according to national and international standards as e.g.: UL and EN.

NAFFCO PSV-PH can give up to 4 hours of fire protection.



SPECIFICATION	NAFFCO PSV-PH
Colour	Grey
Consumption	6 - 7 l water + 20kg dry mortar ≈ 20 l ready-to-use wet mortar ≈ 20 l volumes after curing time

*



Fire protection mortar universally applicable within the range of massive walls and floors for:

- ✓ Penetrations of isolated metallic pipe
- ✓ Fire and smoke resistant sealing of single lines according to MLAR
- ✓ Joints around climatic and air ducts, fire dampers, fire protection doors, valves
- ✓ Filling the voids of door steel frames

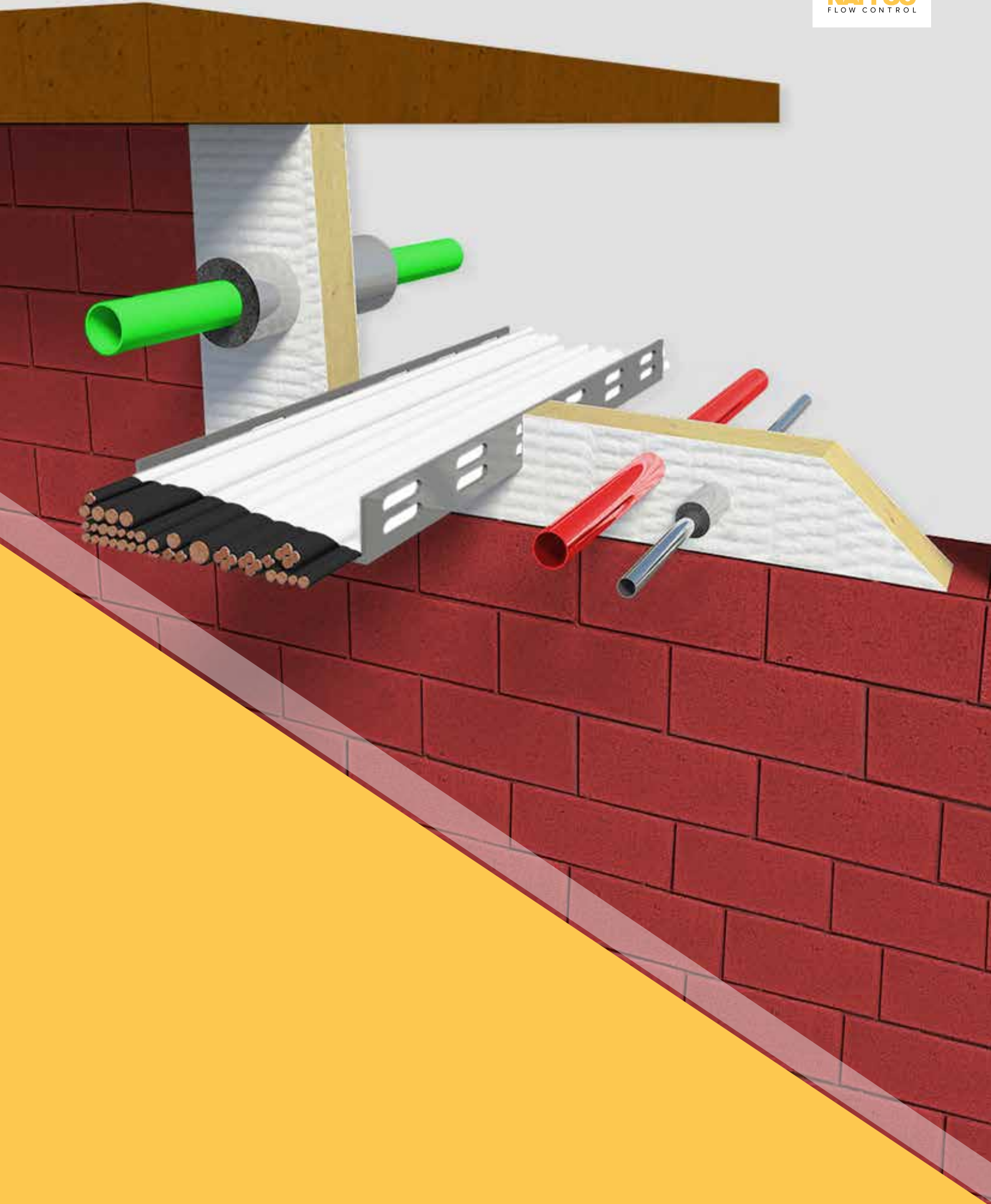
One component, hydraulically hardening; applied by spraying, pressing and manual installation; free from fibres, phenols and halogens, ageing resistant.

Tested and approved according to national and international standards as e.g.: UL and EN.

NAFFCO PSV-PS can give up to 4 hours of fire protection.

SPECIFICATION	NAFFCO PSV-PS
Colour	Grey
Consumption	4.5 - 5.5 l water + 30kg dry mortar ≈ 18 l ready-to-use wet mortar ≈ 18 l volumes after curing time

NOTE: Refer to UL certificate for more information.



Fire Rated Duct Coating



Fire Resistive Protection Layer For Duct

NAFFCO PSV-ICD-120

The water-based intumescent paint based on non-flammable resin with special pigment and additives also has a fire protection efficacy. The paint film will be to form a foam layer like a sponge when occurred to the fire. This foam layer is a good hot-block to reduce the temperature rising speed of steel structures.



FEATURES

- ✓ Water-based
- ✓ Suitable for interior/exterior applications
- ✓ Tested according to BS 476 Part 24:1987
- ✓ Fire-resistance rating R120

CHARACTERISTICS



Low Reactive Temperature



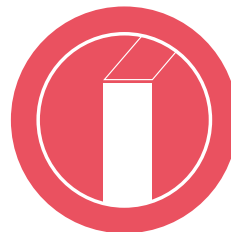
No Asbestos & Fibre



Self Corrosion Prevention



Thin Paint Coating



Smooth Surface

PRIMER

A two-pack, special alloy primer based on epoxy resin, hardener and special pigments.

Used for galvanized steel, aluminium, alum-alloy metal, stainless steel and tile after cleaning.

NOTE: Refer to Certifire certificate for more information.



FIRE STOP DUCT COATING

Fire Rated Boards



About Magnesium Boards

INTRODUCTION

These boards are composed of magnesium oxide, magnesium chloride, perlite, woodchips and glass fabric. These boards are especially predestined for the implementation of various types of fire protection solutions. These boards are classified as A1 (non-combustible) board according to European Standard EN 13501-1.

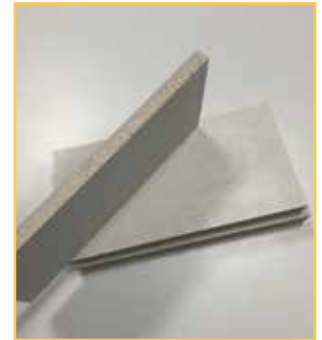
BOARD FINISH

• Smooth Side

- ✓ Paint Finish
- ✓ Wallpaper
- ✓ Marble

• Granulated Side

- ✓ Tile
- ✓ Ceramic



Both sides are suitable for lamination

BOARD SPECIFICATIONS



Fire Insulation - A1 Class, incombustible and non-flammable



Water Resistant and Damp Free



High Heat and Sound Solution



Impact Resistant



Ecological and Environment Friendly



No Discharge of Toxic



Insect and Bacterial Free



High Resistant to variable climate conditions.

Fire Rated Boards

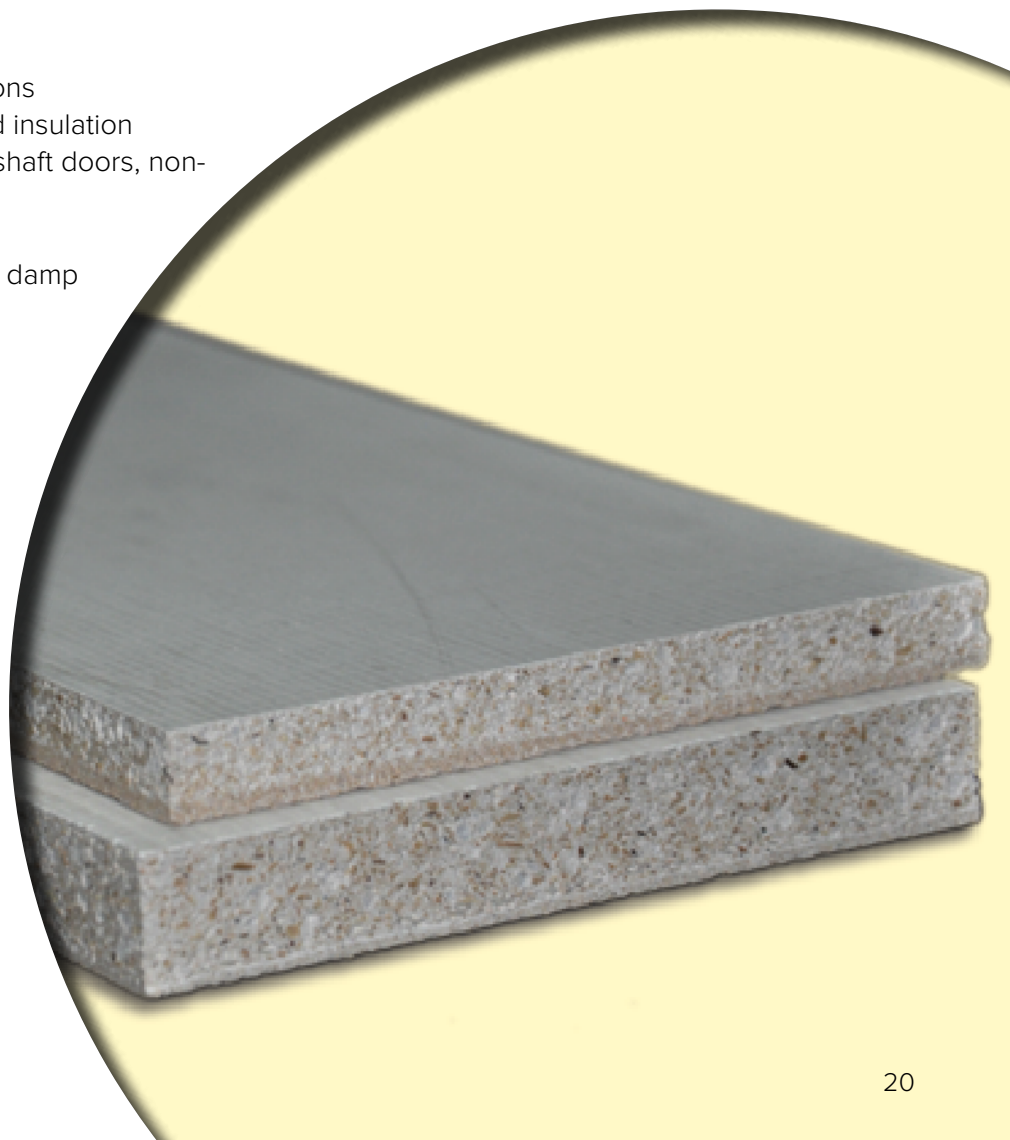
Application of Magnesium Boards

WHERE TO APPLY MgO BOARDS?



APPLICATION FIELDS

- ✓ Exterior Walls
- ✓ Curtain Walls
- ✓ Cladding and Facade Applications
- ✓ Details requiring fire heat sound insulation
- ✓ In the production of fire doors, shaft doors, non-flammable furniture
- ✓ Insulation of cooling towers
- ✓ The area exposed to water and damp
- ✓ Suspended ceilings
- ✓ Raised floor systems
- ✓ Roof Underlayment
- ✓ Parapets
- ✓ Fire Walls
- ✓ Fire Barriers
- ✓ Interior Walls
- ✓ Partition Walls





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In line with NAFFCO Flow Control policy for continuous product development, NAFFCO Flow Control has the right to change specifications without prior notice.