



# MAGNUM™ BOARD DECORATIVE FENCE PANELS

## TECHNICAL INFORMATION



<b>Technical Document No.</b>	#020
<b>Title</b>	Magnum Board Decorative Fence Panels
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<b>Version</b>	1.0

NOW AVAILABLE:

# MAGNUM<sup>®</sup> BOARD

## A NEW GENERATION 'breathable' building material developed for our time.

MAGNUM BOARD<sup>®</sup> – A mineral based product that will ensure your next build meets the criteria now demanded by Health Based Building projects. MAGNUM BOARD<sup>®</sup> is one of the few NEGATIVE CO<sub>2</sub> building materials available to the market worldwide.

Install it for health – Install it for life.

A world leader, MAGNUM BOARD<sup>®</sup> is a technologically advanced, high-quality Magnesium Oxide Board (MgO Board) building material that offers superior performance in every category when compared to traditional wood fibre, gypsum and cement based products. It is homogenous – NO de-lamination.

Breathability and versatility are its greatest asset. There is a product available for most applications.

### Exterior

Cladding  
Fascia  
Soffit  
Trim  
Lap Siding  
SIP Panels

### Interior

Wall board – square or tapered edge  
Ceiling board  
Tile backer  
Underlayment  
Drop ceiling tiles  
SIP Panels

## Why Magnum Board?

It allows wall systems to breathe, helping to create a healthy microclimate.

It is unique – engineered to eliminate the toughest problems: fire, water, insects, mould, mildew, impact and toxins. Literally billions of dollars are spent every year as a result of damage caused by these problems. Illnesses and even deaths directly resulted from these problems cost even more. Avoid all this by choosing MAGNUM BOARD<sup>®</sup> when considering building materials such as wood fibre, gypsum or cement based products.

It is considered a 'GREEN' product.

It is a Health Based Building Product completely free of toxins.

It has been subjected to some of the toughest building materials testing regimes. Such as UL 2000 hour freeze thaw test simulating 20 years of wear and tear in all climatic conditions. MAGNUM BOARD<sup>®</sup> is NZ appraised for interior use including wet areas and exterior use as weather boards and rigid air barrier in extra high wind zones. This is indeed a one of a kind material.

It is dimensionally stable in freeze, thaw, heat and humidity cycles.

Excellent adhesion properties allow fantastic finishes with paint, stucco, wallpaper, stone, tile, brick and much more. It is the perfect product for Structural Insulated Panels, Exterior Insulated Finish Systems, and fabric or veneer interior wall systems.

Overall installation and life cycle costs ensure MAGNUM BOARD<sup>®</sup> is very competitively priced due to its high resilience to all damage and 'one product fits all' positioning.

It is both easy and very safe to install.

HEALTH  
BASED  
BUILDING™

*Install it for  
health*  
*Install it for  
life*

MAGNUM<sup>®</sup>  
BOARD

# WHY USE MAGNUM BOARD®

## Is MAGNUM BOARD® considered a health based building product?

Yes it is. MAGNUM BOARD® is a mineral product, completely free of toxins such as asbestos, formaldehyde or silica, is manufactured completely at ambient temperature, and is considered a green product.

## Is MAGNUM BOARD® considered a negative CO<sub>2</sub> product?

Yes indeed the MAGNUM BOARD® product line is CO<sub>2</sub> negative meaning the product and / or its process absorbs CO<sub>2</sub> and turns it into magnesium carbonate and that remains in the board until the board is retired from service, in which case, the magnesium carbonate can be recycled to make MgO and ultimately recycled into more MAGNUM BOARD®.

## Has MAGNUM BOARD® been tested?

Yes indeed. Magnum Board® has been subjected to some of the toughest testing being conducted on building materials today including the freeze / thaw and 2,000 hour weathering test which simulates 20 years of wear and tear in all climatic conditions including high heat and snow. Magnum Board® products are fully appraised in NZ and Underwriters Laboratory (UL) approved. This is indeed a one of a kind material. Our factory is ISO certified and is audited on a quarterly basis by Underwriters Laboratories (UL).

## Is MAGNUM BOARD® dimensionally stable in freeze, thaw, heat and humidity cycles?

Yes it is. Unlike Portland type materials the coefficient of expansion for MAGNUM BOARD® is extremely low; therefore, when selecting and installing products such as our exterior lap siding, there is no need to leave gaps between butt joints to accommodate for such expansion and contraction. This provides a much more aesthetically pleasing finish for many years to come.

## What are the adhesion values of MAGNUM BOARD®?

Excellent allowing you to finish MAGNUM BOARD® with any product you desire such as paint, Portland type stucco, synthetic stucco, wall paper, stone, tile, brick and much more. The excellent adhesion properties of MAGNUM BOARD® also make it a perfect product for Structural Insulated Panels (SIPS), Exterior Insulated Finish Systems (EIFS) and interior wall systems using fabrics and veneers.

## Is the cost of MAGNUM BOARD® competitive with other products?

When considering overall installation and life cycle costs, **absolutely**. By using MAGNUM BOARD® you don't have to worry about damage caused by low or high impacts, termites, carpenter ants or any other pests; decay caused by moisture and UV; warping, swelling and wood rot caused by water; mould and mildew; and, toxins that are found in many wood fibre panels, plastics, gypsum and cement based products.

## How can I hang pictures and other items on MAGNUM BOARD®?

It's simple and easy to hang just about anything from MAGNUM BOARD®. What works with gypsum based panels works with Magnum Board.

## How do I store MAGNUM BOARD®?

Storage and handling of MAGNUM BOARD® is simple. Refer to the technical manual for details.

## Is MAGNUM BOARD® easy to install?

Indeed it is. MAGNUM BOARD® installs with screws or pneumatic nailers depending on the application you are using it for. Always follow the MAGNUM® Building Products installation recommendations.

Finishing interior walls and ceilings is also easy using standard joint compound and fibre or paper tape. Since MAGNUM BOARD® is smooth on one side, you can achieve a level 5 beautiful and durable finish with much less work (man-hours) than typical gypsum based panels.

## Is MAGNUM BOARD® safe for installers?

Yes. In fact installing Magnum Board® is as safe if not safer than installing any other material on the market today. Magnum Board® is a mineral based product free of carcinogens and silica. Magnum Board® is extremely safe for installers and consumers alike.

**MAGNUM BOARD® is Virtually Impervious to:**  
**Fire** Non-Flammable BRANZ appraised Group 1S NZ appraised 60 minute fire rating Non-Combustible (E136).

**Water** Does Not Feed Mould or Mildew nor does it decay in any way.

**Insects** Such as termites, borer and sugar ants.

**MAGNUM BOARD® is Non-Toxic (U-Pitt Protocol) and VOC compliant (D5116).**

**MAGNUM BOARD® is NZ appraised for exterior applications such as: Backer Board - Underlayment - Walls - Ceilings - Trim - Drop Ceiling Tiles - One Hour Fire Walls.**

**MAGNUM BOARD® is NZ appraised for exterior applications such as: Wall and Ceiling Board - SIPS - Fascia - Soffit - Trim - Exterior Lap Siding and RAB.**

**MAGNUM BOARD® can be finished with almost any product, such as paint, synthetic stuccos, breathable renders, certain decorative laminations and stains.**

**MAGNUM BOARD® is now fully appraised in Foreverbreathe™ High Performance Breathable Wall Systems.**



[www.healthbasedbuilding.com](http://www.healthbasedbuilding.com)



# HOME of MAGNUMBOARD®

"The New Generation **GREEN** Building Material"

"Install It for Health-Install It for Life"

Sheathing & Trim Products

## Material Safety Data Sheet

MSDS No.: MBGEP-032107-5

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### Magnum Board® Brand Products

#### SECTION 1: COMPANY AND PRODUCT INFORMATION

Magnum Building Products LLC  
405 North Reo Street  
Tampa, FL 33609  
USA

Phone: 813-304-2577

Facsimile: 813-304-2578

Website: [www.magnumbp.com](http://www.magnumbp.com)

Email: [Info@magnumbp.com](mailto:Info@magnumbp.com)

Use: Exterior: Sheathing, ceiling board, drop ceiling, siding, cladding and trim material.

Interior: Wallboard, ceiling board, tile backer board, underlayment and trim materials.

Structural Insulated Panels (SIPS) and Exterior Insulated Finish Systems (EIFS)

#### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

<b><u>Ingredient</u></b>	<b><u>CAS No.</u></b>	<b><u>Hazard Class</u></b>
Magnesium Oxide	1309-48-4	None
Magnesium Chloride	7786-30-3	None
Cellulose	9004-34-6	None
Perlite	93763-70-3	None
Proprietary Additives	N/A	None
Fiberglass Scrim	65997-17-3	None

#### SECTION 3: HAZARDS IDENTIFICATION

**Emergency Overview:** Non-toxic, non explosive and is not a fire hazard.

**Primary Routes of Entry:**

**Eyes:**

Dust may irritate the eyes from mechanical abrasion causing watering and redness.

**Skin:**

Dust may cause irritation of the skin from friction but cannot be absorbed through intact skin.

**Ingestion:**

Unlikely under normal conditions of use, but swallowing the dust from this product may result in irritation to the mouth and gastrointestinal tract.

**Inhalation:**

Dust may cause irritation of the nose, throat, and airways, resulting in coughing and sneezing. Certain susceptible individuals may experience wheezing (spasms of the bronchial airways) on inhaling dust during sanding or sawing operations.

<b>SECTION 4: FIRST AID MEASURES</b>
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**EYES:**

Remove contact lens. Flush with running water or saline for at least 15 minutes. Seek medical attention if redness persists or if visual changes occur.

**SKIN:**

Wash with mild soap and water. Contact physician if irritation persists or later develops.

**INGESTION:**

If ingested, dilute by drinking large amounts of water. Do not induce vomiting. Seek medical attention.

If unconscious, loosen tight clothing and lay the person on his / her side. Give nothing by mouth to an individual who is not alert and conscious. Seek medical attention.

**INHALATION:**

Remove to fresh air. If shortness of breath or wheezing develops, seek medical attention.

**NOTES TO PHYSICIAN OR FIRST AID PROVIDERS:**

Treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

Magnum™ Building Products line of “Magnum Board®” Products are non flammable, non explosive and non combustible.

**Fire and Explosion Hazard**

**Flash Point:** Not applicable.

**Auto-ignition:** Not applicable

**Extinguishing Media:**

This material is non combustible. Appropriate extinguishing media should be used for surrounding fire.

**Fire Fighting:**

Fire fighting personnel should wear normal protective equipment.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

No special precautions are necessary to pick up product that has been dropped. The following applies only to spills or releases of dust generated during cutting or sanding Magnum Board®.

**Precautions:**

Good housekeeping practices are necessary for cleaning up areas where dust has been produced. Take measures to either eliminate or minimize the creation of dust.

Wherever possible, practices likely to generate dust should be controlled with engineering controls such as local exhaust ventilation, dust suppression with water and containment, enclosure or covers.

**Cleanup Methods:**

A fine water spray may be used to suppress dust when sweeping (dry sweeping is not recommended). Vacuuming with an industrial vacuum cleaner outfitted with a high-efficiency particulate (HEPA) filter is recommended over sweeping. Waste may be disposed of by landfill in compliance with federal, provincial, state and local requirements governing non-toxic mineral materials

Avoid using materials and products that are incompatible with this product. (Refer to section 10.)

**SECTION 7: HANDLING AND STORAGE**

**Handling and Storage** Products in their intact state do not present a health hazard. The controls below apply to dust generated from the boards by cutting, drilling, routing, sawing, crushing, or otherwise abrading, and cleaning or moving sawdust.

**Other Precautions:**

Even though Magnum Board® has been tested and deemed non toxic, Magnum Building Products recommends that exposure to dust be kept as low as reasonably possible. Respirable levels should not exceed those specified by OSHA and MSHA and identified in this MISDS. Exposure to respirable (fine) dust depends on a variety of factors, including activity rate (i.e. cutting rate), method of handling (i.e. electric shears), environmental conditions (i.e. weather conditions, workstation orientation) and control measures used.

Wherever possible, practices likely to generate dust should be carried out in well ventilated areas (i.e. outside). The work practices and engineering controls set out in Section 8 should be followed as precautions to reduce dust exposures.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Engineering Controls**

**Cutting Outdoors:**

1. Magnum Building Products recommends positioning cutting station so that wind will blow dust away from user or others in working area and allow for ample dust dissipation.
2. Use one of the following methods based on the required cutting rate and jobsite conditions.

**Best**

- Score and snap using carbide-tipped scoring knife or utility knife (Ability to use this method depends on thickness of Magnum Board® being installed.)
- Fibercement board shears (electric or pneumatic).

**Better**

- Dust reducing circular saw equipped with appropriate blade and HEPA vacuum extraction.

**Good** (for low to moderate cutting only)

- Dust reducing circular saw with appropriate saw blade.

Always use correct tools when executing all cutting operations.

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**Ventilation:**

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limit.

**Respiratory Protection:**

Dust mask is recommended. .

**Eye Protection:**

When cutting material, dust resistant safety goggles / glasses should be worn and used in compliance with ANSI Standard Z87.1-1-1989 and applicable OSHA (i.e. 29 CFR 1910.133) standards.

**Skin Protection:**

Loose comfortable clothing should be worn. Magnum Building Products recommends that direct skin contact with dust and debris be avoided when possible by wearing long sleeved shirts and long trousers, a cap or hat, and gloves.

**Sanding / Drilling / Other Machining:**

If sanding, drilling, or other machining is conducted, Magnum Building Products recommends wear a NIOSH-approved dust mask.

**Important Notes:**

1. For maximum protection (lowest respirable dust production), Magnum Building Products recommends always using "Best" level cutting methods where feasible.
2. Always use a circular saw blade that is appropriate for the specific operation being undertaken.
3. Dry sweeping is not the preferred clean up method - Magnum Building Production suggests wet suppression methods or HEPA vacuum.
4. It is not recommended that a grinder or continuous rim diamond blade be used for cutting.
5. Always follow tool manufacturer's safety recommendations.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****Appearance:**

Various colors depending on application, each with varying dimensions according to product used.

**Odor:**

Very mild

**Physical State:**

Solid boards



**Vapor Pressure:**

Not relevant.

**Specific Gravity:**

Not relevant.

**Flammability Limits:**

Not relevant.

**Boiling Point:**

Not relevant

**Melting Points:**

Not relevant.

**Flash Point:**

Not relevant.

**Auto-ignition Temperature:**

Not relevant.

**Volatility:**

Not relevant.

**Solubility in Water:**

Not relevant.

**Evaporation rate:**

Not applicable.

**NFPA Ratings (Scale 0 – 4)**

Health = 1

Flammability = 0

Reactivity = 0

Personal Protection = E

<b>SECTION 10: STABILITY AND REACTIVITY</b>
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**Stability:**

The Magnum Board products identified in section 1 are stable under ordinary conditions.

**Conditions to Avoid:**

Excessive dust generation without proper dust mask protection.

**Materials to Avoid:**

**Incompatibility:** Hydrofluoric acid will dissolve Magnesium Oxide and can generate Magnesium Chloride fumes.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Magnum Board® products are non toxic in their intact form. The following applies to dust that may be generated during cutting and sanding.**

**Chronic Effects:**

**Inhaled:** Repeated and prolonged overexposures to dust may cause increased risk of bronchitis. It is possible that repeated inhalation exposure to Magnum Board® fiber dust over time may lead to inflammation of the lungs in humans. All necessary precautions should be taken to prevent inhalation of dust to prevent these problems.

**SECTION 12: ECOLOGICAL INFORMATION**

Because Magnesium Oxide is a naturally occurring mineral, releases that may occur into the environment are not expected to leave any hazardous material that could cause a significant adverse impact.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Dispose of material, as an inert, inorganic mineral, in conformance with federal, provincial, state and local regulations. Magnum Board® is not an RCRA hazardous waste.

**SECTION 14: TRANSPORT INFORMATION**

There are no special requirements for storage and transport of Magnum Board™.

<b>UN No:</b>	None allocated
<b>Dangerous Goods Class:</b>	None allocated
<b>Hazchem Code:</b>	None allocated
<b>Poisons Schedule:</b>	None allocated
<b>Packing Group:</b>	Not applicable
<b>Label:</b>	Not a DOT hazardous material.

**SECTION 15: REGULATORY INFORMATION**

**DOT Hazard Classification:** None

**Placard Requirement:** Not a DOT hazardous material.

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**CERCLA Hazardous Substance (40 CFR Part 302)**

<b>Listed substance:</b>	No
<b>Unlisted Substance:</b>	No
<b>Reportable Quantity (RQ):</b>	None
<b>Characteristic(s):</b>	Not applicable
<b>RCRA Waste Number:</b>	Not applicable

**SECTION 16: OTHER INFORMATION**

**Preparation of Information and Disclaimer:**

This form has been prepared to meet current Federal OSHA hazard communication regulations and is offered without any warranty or guarantee of any type. Magnum Building Products cannot control the use of its products, and therefore specifically disclaims liability and responsibility arising from the use, misuse and/ or alteration of its products.

The information contained in this MSDS was produced without independent scientific or medical studies analyzing the effects of Magnum Board® dust upon human health. The information contained herein is based upon scientific and other data Magnum Building Products believes is valid and reliable and provides the basis for this MSDS. The information contained herein relates only to specific materials listed in the document. It does not address the effects of Magnum Board® dust when used in combination with other materials or substances, or when used in other processes. Because conditions of use are beyond Magnum Building Products control, the company makes no representations, guarantees or warranties, either express or implied warranties as to the fitness of the product for use, and assume no liability related to the information contained above.

Magnum Building Products requires, as a condition of use of its products, that purchasers comply with all applicable Federal, Provincial, State, and Local health and safety laws, regulations, orders, requirements, and strictly adhere to all instructions and warnings which accompany the product.



Solvent free matt-white mineral exterior paint which binds with the substrate and is water repellent (hydrophobic) which protects against excessive water absorption making it weather resistant. This paint has low surface tension, high vapor permeability with a breathability rating SD value of 0.01m, good hiding power and good coverage. Exterior silicate paint can be tinted with inorganic light-stable pigment pastes.

**Surface Preparation:** mask carefully the area around the painted surface, especially glass, brickwork, and natural stones. Surface must be clean and dry prior to application. Exterior silicate paint is suitable for all exterior applications, on solid unpainted mineral surfaces such as plaster, lime masonry, cleaned concrete, MAGNUM Board, and surfaces already treated with silicate and mineral paint coatings. Especially for coatings of historic and listed buildings. New mineral or freshly plastered substrates are suitable only after a sufficient drying/curing time of 14-28 days or longer depending on weather and season.

**Application:** Stir well before use. Brush or roll on. Recommended temperature during application is not less than 8 degrees Celsius for both the air and the substrate. Do not apply in full sun.

**Porous substrates:** apply a 1:1 ratio mix of exterior silicate paint and silicate primer for first coat followed by 1 top coat of exterior silicate paint. Dilute up to 10% with water if necessary .

**Low Absorbent surfaces:** (ex/ Magnum Board) No primer required. Apply two coats of exterior silicate paint. Dilute up to 10% with water if necessary.

**Full colour tone application on low absorbent and solid surfaces** (ex/ Magnum Board): Apply one coat of exterior silicate white paint, followed by two coats of tinted exterior silicate paint. Painting in one direction only may cause streaks both with white and particularly so with tinted Exterior Silicate paint. It is recommended to brush or roll in all directions.

**Shelf life and Storage:** 1 year unopened. Store well sealed. Opened containers should be used quickly. Store in a cool dry place away from frost. Keep out of children's reach.

**Disposal:** empty containers can be brought to recycling depots. Thoroughly dried paint residues and hardened solidified paints can be disposed of in household waste. Liquid products must be discharged as special waste.



**Constituents:** Potassium silicate with organic stabilizers. Titanium dioxide (VOB DIN 18363, 2.4.1)

**Coverage:** approximately 130-160 ml/m<sup>2</sup> per coat on smooth surfaces (about 65-75 m<sup>2</sup>/10L pail). An accurate coverage can only be given by a test application.

**Drying time:** Thoroughly dry and ready for the next coat after 2-3 days (assuming a +20 degree Celsius, 65% r.H.) Low temperatures, high air humidity, humid substrates and poor ventilation delay drying.

**Indication:** The coverage may vary according to the substrate composition. This product contains no VOC. Exterior silicate paint will last between 5-15 years before a recoat is required depending on various factors such as weather, sun exposure, rain, dust, sand, humidity, and constructive façade protection.

Foreverbreathe is now the better way -  
install it for health, install it for life.



# Hardie & Thomson™

HEALTH-BASED BUILDING MATERIALS SPECIALISTS

HOME OF FOREVERBREATHE™ Visit [www.hardie-thomson.co.nz](http://www.hardie-thomson.co.nz)  
for more details, product appraisal documents and installation guidelines

DIN EN  
18 363



Covering power:  
Class 2 – 6 sqm/l

Abrasion resistance: Cl. 2



100%  
solvent free



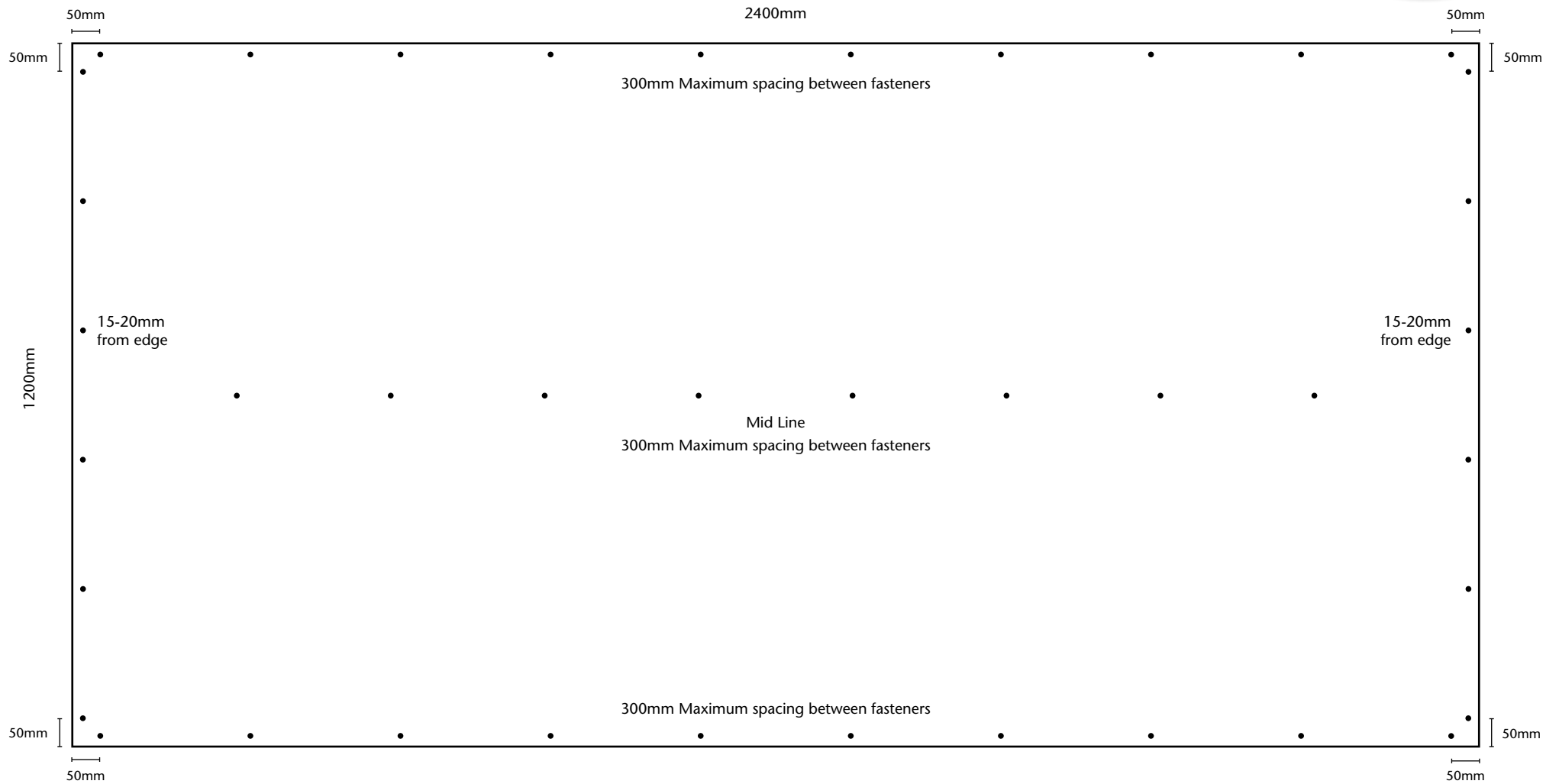
Datasheet  
all product informations



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# MAGNUM BOARD DETAILED FIXING INSTALLATION DIAGRAM





**MAGNUM BOARD DECORATIVE FENCE PANEL SCREWS**

**PRODUCT CODE: MBWBSSN65**

**PICTURE TO COME**