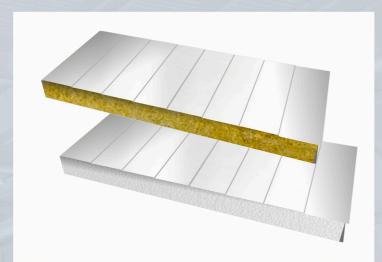
# Insulated Metal Panels APANEL MANUFACTURING INC.

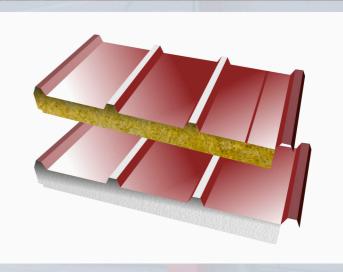


Versatile Single Component System

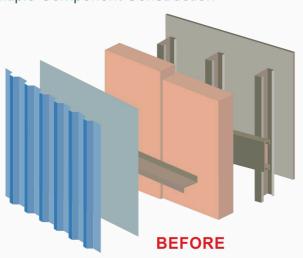








Multiple Component Construction



Single Component



# Why Insulated Metal Panels Benefits



#### **Faster Build**

- Faster on-site installation time compared to traditional multi-part systems, as they are a single component installed by a single trade.
- Factory assembled insulation and dual metal facing panels to create a single high strength unit.
- One step installation, increasing the speed of build and minimizing delays by approx 50%.
- Meets building codes.



### **Energy Efficient**

- Interlocking groove joints with concealed fasteners create a water and air tight seal, stabilizing interior environments and saving energy costs.
- Superior thermal insulation capabilities compared to other insulating materials. (Roxul R-Value: 3.6/in, EPS R-Value: 4.04/in)
- The insulated panels are wrapped around the entire exterior of the building, providing the best thermal envelope.
- · No thermal drift.



### **Measurable Savings**

- Insulated panels have a high strength-to-weight ratio allowing for longer spans compared to other construction methods, reducing both transport and installation cost.
- Single component installation reduces trades involved and labor costs.
- Reduces operation costs and maintenance, while still having the same life span as other building materials.



### **Design Flexibility**

- Very versatile with a variety of colours, finishes, accessories, profiles and trims with hidden fastener systems.
- Solutions for both vertical and horizontal applications.
- Design is not compromised when incorporating doors, windows and other construction materials into the design.



### Sustainable

- Made with minimum 30% recycled steel.
- 100% recyclable and reusable at the end of its service life
- Contributes to LEED® credits and Net-Zero Energy targets.
- Closed cell insulation resists moisture and does not support growth of mould.

### Colour Selection

### STANDARD / TEXTURED - WALL & ROOF



### **WALL ONLY**

WHITE RAL 9010 FLAT	WHITE RAL 9002 FLAT	SILVER RAL 9006 FLAT	WHITE QC 9862 TEXTURED	
☐ OUTSIDE ☐ INSIDE	☐ OUTSIDE ☐ INSIDE	☐ OUTSIDE ☐ INSIDE	☐ OUTSIDE ☐ INSIDE	

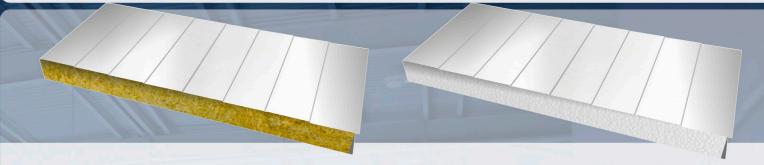
### PREMIUM COLOURS





## What is an Insulated Metal Panel

An insulated metal panel is a lightweight modular building material which forms the entire building envelope (walls and roof), thermal insulation, vapour barrier, weatherproofing, fire resistance (mineral fiber insulated panels) and finish. Our panels consist of metal facings bonded to a structural mineral wool or EPS (Expanded Polystyrene) core, available with unique fastener system for increased aesthetic appeal.



## Roxul Insulation Benefits

### **Fire Resistant**

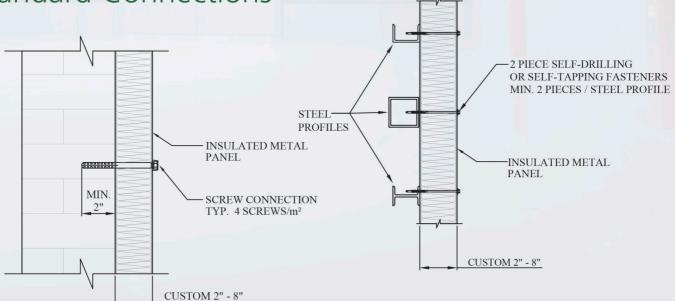
- Withstand temperatures up to 2150°F.
- Water Repellent (R-Value not affected)
- Resistant to rot, mildew, mold, and bacterial growth
- Safer indoor environment
- Made from natural stone & recycled material
- Dimensional stability
- Roxul insulation is more expensive than EPS, but has overall better value
- Noise barrier

# EPS Benefits (ECONOMICAL)

### Long-term R-value

- Energy efficient
- Constant thermal resistance
- Measurable energy savings
- Strength
- Sustainability
- No growth of bacteria, nor will it decay over time
- Dimensional stability
- Chemical inertness

## Standard Connections



**CONNECTION TO STEEL** 

SCALE: NOT TO SCALE

**CONNECTION TO MASONRY** 

SCALE: NOT TO SCALE

## Specifications

### MINERAL WOOL FIBRE

ROXUL products are mineral wool fibre insulations made from basalt rock and slag. This combination results in a non-combustible product and a melting point of approx. 2150°F (1177°C), which gives it excellent fire resistant properties. ROXUL mineral wool is a water repellent yet vapour permeable material.

### **Compliance and Performance:**

**ASTM E 84 (UL723)** Surface Burning Characteristics: Flame Spread = 0Smoke Developed = 5 ASTM E 136 Behavior of Materials at 750°C(1382°F): Non-Combustible CAN4 S114 Test for Non-Combustibility: Non-Combustible

#### **Moisture Resistance:**

Moisture Sorption = 0.05%

### **Dimensional Stability:**

ASTM C 356 Linear Shrinkage = 0.19%

### **Thermal Resistance:**

ASTM C 518 (C 177)

#### R-value/3.6 inch @ 75°F = 4.0hr.ft<sup>2</sup>.F/Btu

RSI value/25.4mm @  $24^{\circ}$ C =  $0.71m^{2}$ K/W

### **Corrosion Resistance:**

ASTM C 165 Corrosiveness = Passed ASTM 795\*\*\* Stainless Steel Stress Corrosion Specification as per Test Methods C871 & C692: U.S. Nuclear Regulatory Commission, Reg. Guide#1.36: U.S. Military Spec.'s MIL-I-24244 (all versions including B and C)

### **Density:**

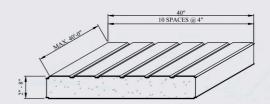
8.5 lbs/ft<sup>3</sup> 136 kg/m<sup>3</sup>

### **Compressive Strength:**

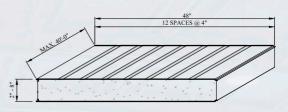
ASTM C 165 @ 10% 4" Board: 6.64psi (45.8kPa)

### Panel Profiles

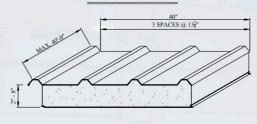
### **WALL PANEL 10**



### **WALL PANEL 2**



### **ROOF PANEL**



### **EXPANDED POLYSTYRENE (EPS)**

EPS insulation HD (High Density) is a moulded expanded polystyrene insulation. EPS is a closed cell, rigid foam plastic insulation that does not contain a blowing agent such as HCFC or HFC that provides a temporary increase in thermal resistance.

- Meets CAN/ULC-S701, Type 2
- Thermal resistance RSI 0.70/25 mm R-value 4.04/inch
- Compressive resistance: 16 psi
- Closed cell insulation resists moisture
- CCMC 12425-L





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