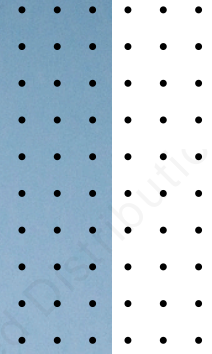




**Ecosteel
Source**



**ROOFING & WALL PANELS
SANDWICH PANELS
CATALOGUE**

www.ecosteel.com

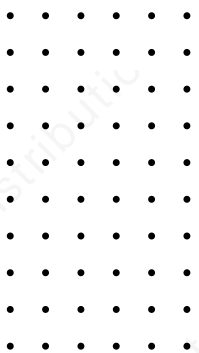
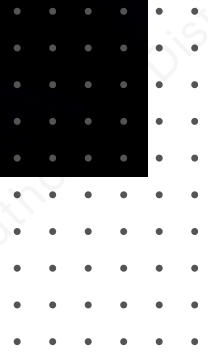


TABLE OF CONTENT



01. Who are we	03
02. Our Story	04-05
03. Product Overview	06-07
04. Series introduction	08-09
05. Sandwich panels	10
06. Type Explanation.....	11
07. Rock Wool Sandwich Panel	12-13
08. Polyurethane (PU) Sandwich Panel	14-15
09. PU-Edge Sealed Rock Wool Sandwich Panel.....	16
10. Comparison	17
11. Perforated Acoustic Sandwich Panel	18
12. Thermal Process Tunnel Panel	19-20
13. Cold Storage Panel	21-22
14. Cleanroom Panel (Mechanized)	23-24
15. Order Process.....	25
16. Why choose us	26



WHO ARE WE

Ecosteel Source is a professional supplier of steel materials, offering Zinc-Aluminum-Magnesium (Z-A-M) coated steel, Galvalume (GL), pre-painted steel coils, and steel construction product made from that like Floor Decks, Steel Truss Floor Deck, Sandwich Panels (Hand-made & Machine-made), C/Z/U purlins, steel Studs, Tracks & Furring Channels, and Steel Accessories like Steel Strapping Seal.

With advanced processing equipment and strict quality control, we deliver durable, eco-friendly, and customized solutions for construction, industrial facilities, infrastructure, and cleanroom systems.

OUR STORY

Rooted in Nature. Committed to the Future.

Ecosteel Source was founded in Sichuan, a region known not only for its emerging industrial base, but also as the native home of the giant panda – a global symbol of ecological harmony. Inspired by this unique environment, we are deeply aware of the responsibility to balance industrial progress with environmental sustainability.

In today's fast-evolving steel industry, we believe that strength and sustainability should go hand in hand. Drawing from the panda's symbolism of balance and resilience, Ecosteel is committed to delivering steel solutions that combine durability with environmental responsibility.

Born in Sichuan – a place of strength and serenity – we carry the spirit of the giant panda into everything we build.



OUR STORY

Inspired by the panda. Built for a greener world.

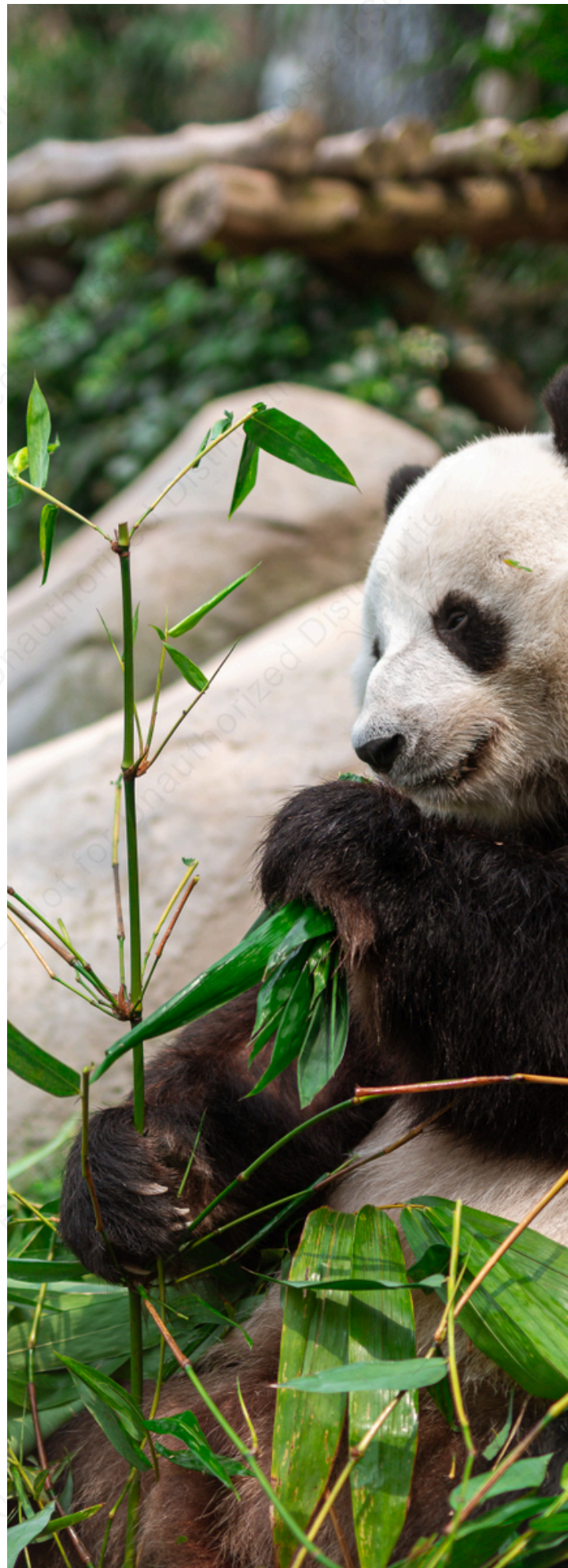
As both a materials supplier and a finished product manufacturer, we serve a wide range of industries — from industrial construction and cold chain logistics, to coastal projects and cleanroom environments. Whether it's floor decking, roofing panels, or structural components, we aim to reduce maintenance, extend service life, and minimize the carbon footprint of every building.

Our mission is to bring harmony between industry and ecology.

With every coil, panel, or beam we deliver, we take a step toward a greener construction future.

When you choose Ecosteel, you are not only choosing reliable steel products —

you are choosing a future where performance and sustainability work together.





PRODUCT OVERVIEW

- ☑ **Steel Building Materials:** Floor Deck System; Roofing & Wall Panels; Metal Studs & Purlins
- ☑ **Coils & Sheets:** Galvanized Steel (GI); Galvalume Steel (GL); Zinc-Aluminum-Magnesium (Z-A-M) coated steel, Pre-painted color coated steel (PPGI, PPGL)
- ☑ **Steel Accessories:** Steel Strapping Seal



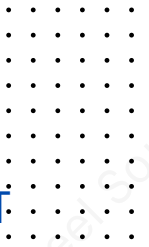
PRODUCT OVERVIEW

STEEL BUILDING MATERIALS

- Floor Deck System:** Open type floor deck; Steel Truss Deck
- Roofing & Wall Panels:** Color coated steel sheets(also called Metal Roofing Sheet or Metal Wall Cladding Panel); sandwich panels, handmade cleanroom panels
- Metal Studs & Purlins:** C/Z/U purlins; Steel stud, track & furring channels


PRODUCT SERIES

FROM **PREMIUM** TO **VALUE** — TAILORED FOR EVERY PROJECT




 **ES Prime Series**
Premium · Innovative · Exceptional



 **ES Standard Series: Balanced · Versatile · Durable**



 **ES Value Series: Affordable · Practical · Reliable**

HOW TO CHOOSE?

At Ecosteel Source, every series delivers the same reliable foundation—what sets them apart is the **material grade** and **performance level**.

- **Unified Standards:** All series follow the same specifications in size, thickness, and structure.
- **Tailored Performance:** Differences lie in the raw materials and durability enhancements.
- **Worry-Free Choice:** Select the series that matches your budget and project goals with full compatibility assurance.

PRODUCT SERIES

FROM **PREMIUM** TO **VALUE** — TAILORED FOR EVERY PROJECT

ES Prime - Flagship Performance

- Top-tier quality
- Advanced coatings
- Extended lifespan
- Premium applications

Typical materials: High-grade ZAM steel (Zinc-Aluminum-Magnesium), premium Galvalume (like AZ120, AZ150), High zinc coat Galvanized steel (GI) (from 150 to 900g/m²), fluorocarbon (PVDF) coated steel etc.

ES Standard - Balanced Reliability

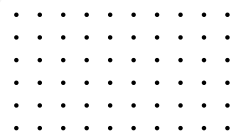
- Solid performance
- Good corrosion resistance
- Cost-performance balance
- Versatile use

Typical materials: Galvanized steel (GI) (Zinc 60g-120g/m²), Galvalume (GL)(less than AZ120), basic ZAM steel, HDP&SMP Pre-painted Steel etc.

ES Value - Smart Affordability

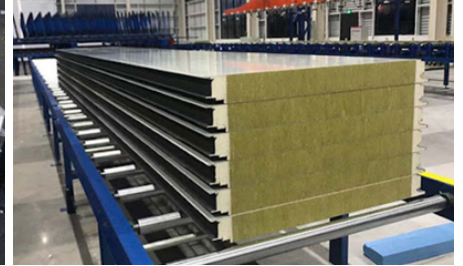
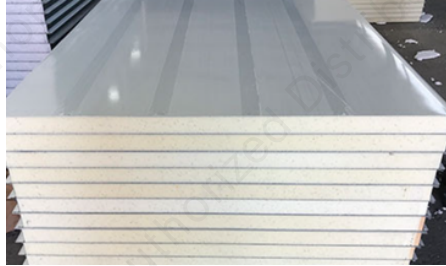
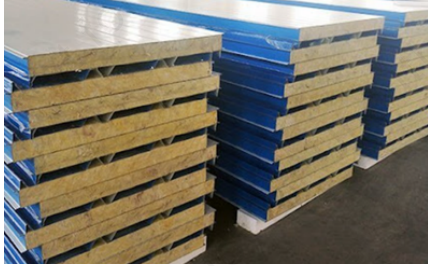
- Economical solution
- Essential quality
- Simplified specs
- Budget-focused use

Typical materials: Basic Galvanized steel (GI) (Zinc 30g-60g/m²), economical PE Pre-painted Steel etc.



SANDWICH PANELS

1. Fire & Thermal Insulation Panels



Rock Wool Sandwich Panel

Excellent fire resistance and thermal insulation

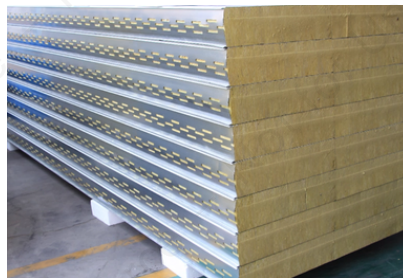
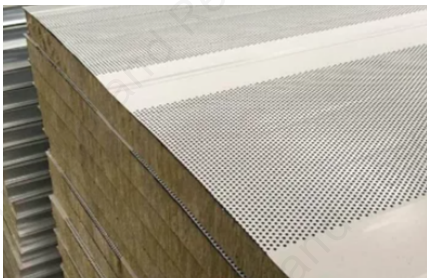
Polyurethane (PU) Sandwich Panel

Superior thermal efficiency with lightweight structure

PU-Edge Sealed Rock Wool Sandwich Panel

Fireproof core with airtight PU edge sealing

2. Functional Panels



Perforated Acoustic Sandwich Panel

High sound absorption for industrial and commercial buildings

Thermal Process Tunnel Panel

Stable insulation for continuous high-temperature environments

3. Special Application Panels



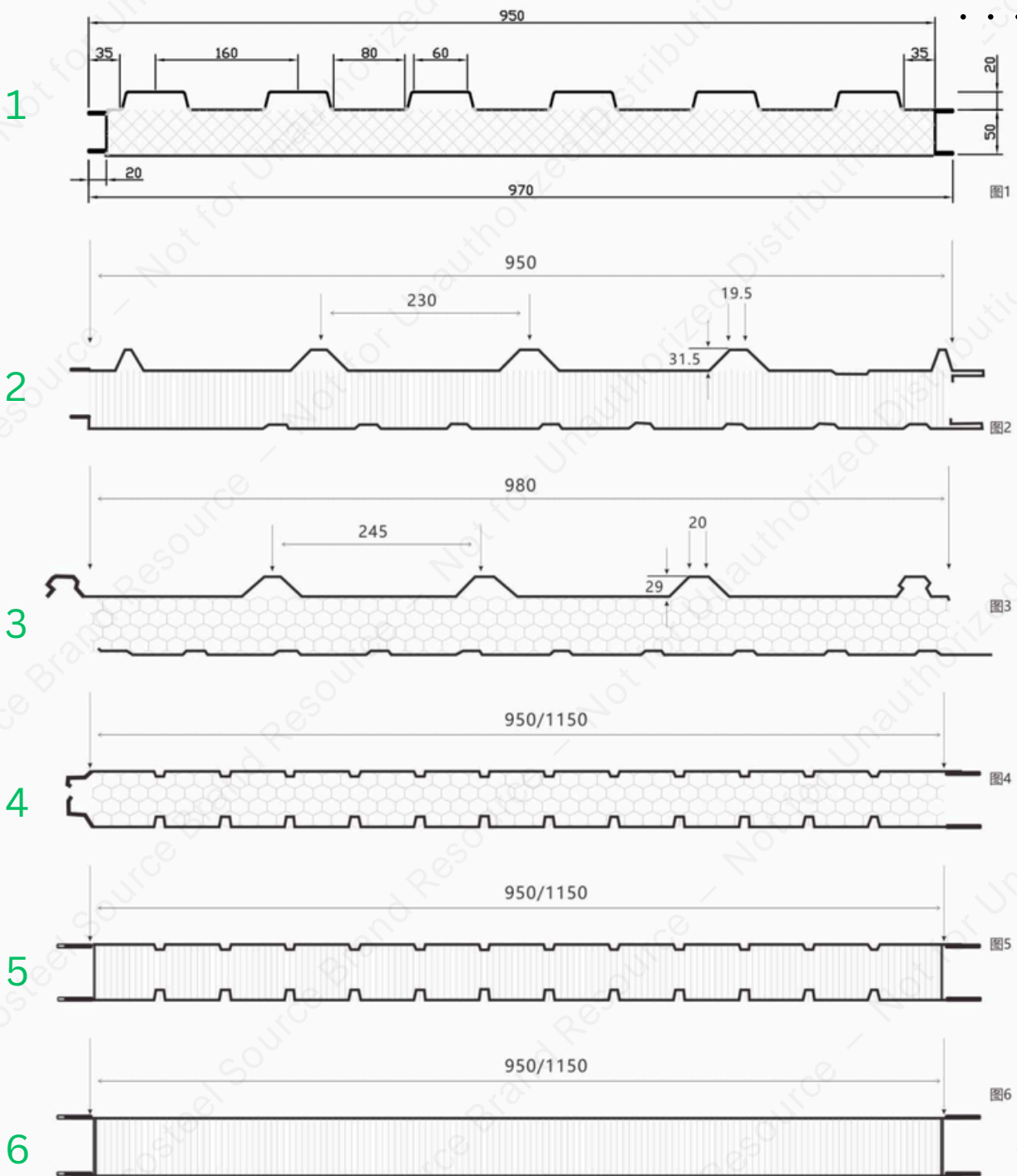
Cold Storage Panel

Exceptional thermal insulation for refrigerated facilities

Cleanroom Panel (Mechanized)

Smooth surface and airtight design for contamination control

BOARD TYPE EXPLANATION

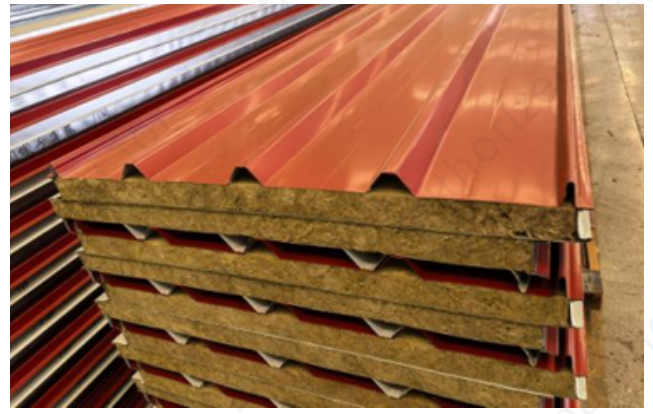
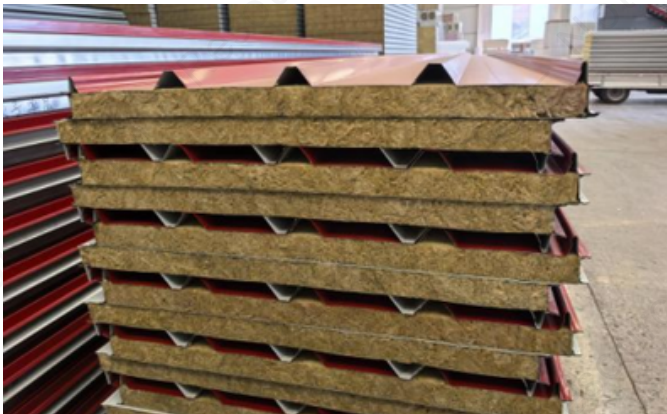


- Figure 1: Small wave tile, Foam/Rock Wool/PU core sandwich panel
- Figure 2: 950 type ,Foam/Rock Wool/PU core edged corrugated sandwich panel
- Figure 3: 980 type, Foam/Rock Wool/PU corrugated sandwich panel
- Figure 4: 950/1150 type, Foam/Rock Wool/PU core- and - groove corrugated sandwich panel
- Figure 5: 980/1150 type, Rock Wool (Light) core/Rock Wool/PU- and - groove corrugated sandwich panel
- Figure 6: 980/1150 type, Foam/Rock Wool/PU/purified rock wool core- and - groove corrugated sandwich panel

ROCK WOOL SANDWICH PANEL



Our factory's Rock Wool Sandwich Panel Production Line and Packaging Equipment

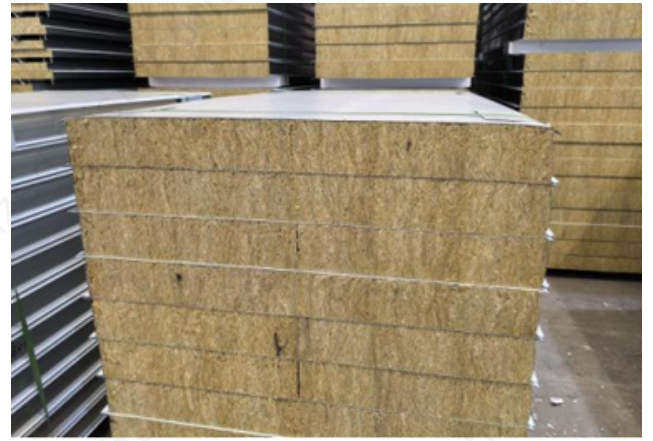
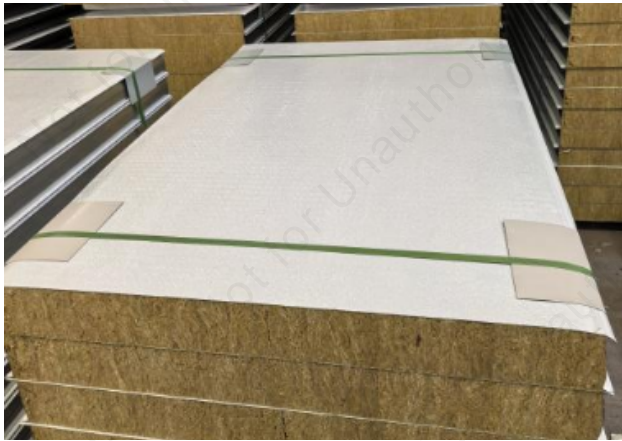


**Corrugated Rock Wool Sandwich Panel
(Color-Coated Steel Surface)**



**Corrugated Rock Wool Sandwich Panel
(Galvanized Steel Surface)**

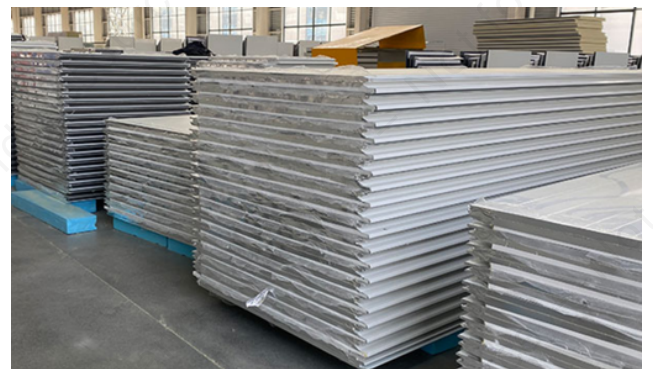
ROCK WOOL SANDWICH PANEL



**Flat Rock Wool Sandwich Panel
(Embossed Orange Peel Texture)**



Square Ribbed Rock Wool Sandwich Panel



Quad-Lock Rock Wool Sandwich Panels
Four-sided interlock; Stable connections;
Quick-fit design; Concealed joints

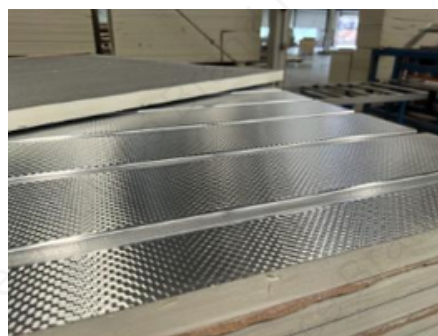
POLYURETHANE (PU) SANDWICH PANEL



**Our factory photos of Automated PU Panel Production Line
& Production environment**

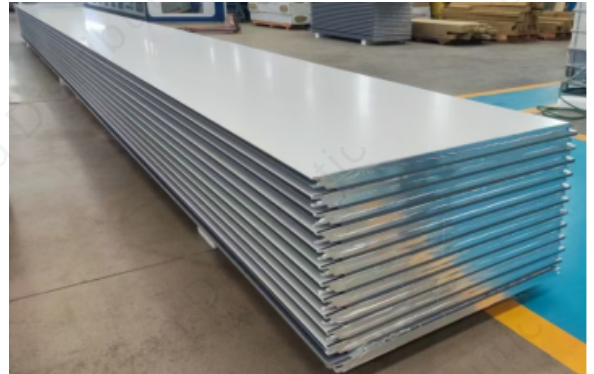


PU Panels

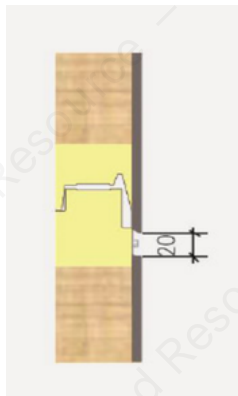


**Polyurethane(PU) Sandwich Panel for Floor Heating
(with Grooved Surface for Easy Pipe Installation)**

POLYURETHANE (PU) SANDWICH PANEL



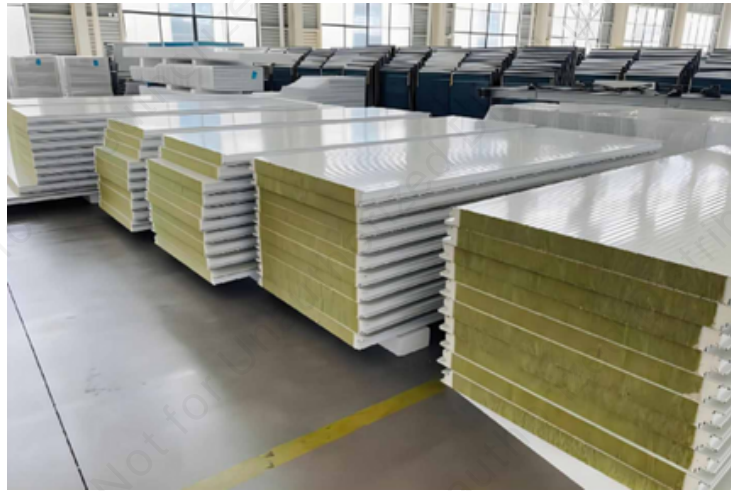
Quad-Lock Polyurethane Sandwich Panel (Four-Sided Interlocking PU Panel)



Joint Diagram Between Panels

Item	double-lock (two-sided interlocking) PU sandwich panels	Quad-Lock Polyurethane Sandwich Panel (Four-Sided Interlocking PU Panel)
Joint Method	With buckle joints on two sides (top - bottom or left - right)	Tongue - and - groove structures designed on all four sides (top - bottom + left -
Installation Method	Horizontal insertion or vertical fitting	Insertable in any direction on four sides, with tighter engagement
Sealing Treatment	Usually need to apply sealant or install sealing strips	With multiple built - in tongue - and - groove seals, better airtightness
Protection Effect	Average windproof/dust - proof performance	Better windproof, waterproof and cold - bridge - preventing performance

PU-EDGE SEALED ROCK WOOL SANDWICH PANEL



Available Surface Options:

Flat, Corrugated, Embossed Orange Peel Texture, Square Ribbed, Quad-Lock Edge.



Square Ribbed PU-Edge Sealed Rock Wool Sandwich Panel



**Flat Surface PU-Edge Sealed Rock Wool Sandwich Panel
(with Protective Film Coating)**

COMPARISON

of sandwich panels in Rockwool, PU & PU edged rockwool

Feature / Panel Type	PU-Edge Sealed Rock Wool Panel	Standard Rock Wool Sandwich Panel	PU (Polyurethane) Sandwich Panel
Fire Resistance	Class A, non-combustible, ideal for strict fire codes	Class A, non-combustible	Lower fire resistance compared to rock wool
Airtightness & Moisture Resistance	PU-sealed edges ensure superior airtightness and prevent moisture ingress	Exposed edges prone to moisture penetration and thermal bridging	Good airtightness but susceptible to fire safety concerns
Thermal Insulation	Sufficient for cold storage and industrial use	Good insulation but less airtight due to joint issues	Excellent insulation, superior to rock wool
Acoustic Performance	Good sound absorption, suitable for noise-sensitive environments	Good acoustic performance	Moderate acoustic performance
Structural Stability	Tight interlocking, stable after installation	Joints less stable, risk of condensation	Stable after installation but weaker fireproof rating
Cost Efficiency	Balanced cost with enhanced fire and airtightness	Relatively economical but lower performance	Higher cost, strong insulation but less fire-safe
Best Applications	Pharma, food, cold chain, cleanroom, energy-efficient buildings	General industrial and commercial buildings with moderate fire requirements	Energy-efficient buildings where insulation is the top priority

PERFORATED ACOUSTIC SANDWICH PANEL



Length	customized
Width	1180mm
Thickness	50mm, 75mm, 100mm, 125mm, 150mm, 200mm, etc.
Bulk Density	80, 100, 120, 200 etc
Color	customized

Key Features

1. Engineered Noise Control System

Through customizing core materials (like rock wool or fiberglass), it showed synergy with the precision-perforated facings to block noise transmission in real usage. Laboratory tests proved that it could help to achieve $\geq 29\text{dB}$ noise reduction across multiple frequency bands.

2. Dual Sound-Absorption Mechanism

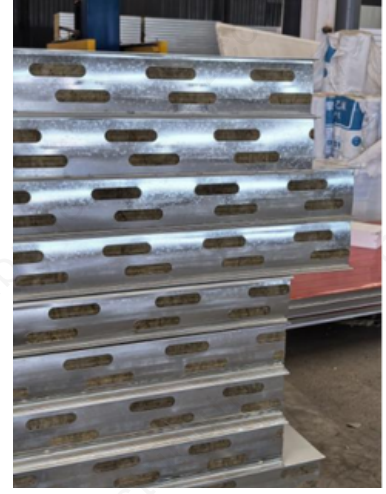
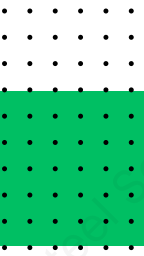
- Surface Noise Dissipation: Micro-perforations could diffuse sound wave energy, and help in reducing impact noise on metal surfaces.
- Core Vibration Damping: High-density acoustic cores suppress the structural resonance and disrupt sound paths.

3. Custom Acoustic Solutions

Configurable parameters for targeted frequency control:

- ① Core material density (60-150kg/m³)
- ② Perforation pattern & open area ratio (8%-24%)
- ③ Panel thickness (50-200mm could be customized)

THERMAL PROCESS TUNNEL PANEL



Technical Specifications

Parameter	Specification
Effective Width	950 mm / 1150 mm
Thickness	50 mm – 150 mm
Length	Customizable
Surface Configuration	Outer panel: Corrugated profile Inner panel: Smooth or ribbed (optional)
Surface Protection	PVC protective film lamination
Color	Standard options available; custom colors upon request

Key Technical Properties

1. Extreme Temperature Resistance

Continuous service temperature:

Mineral wool core: $\leq 600^{\circ}\text{C}$

Ceramic fiber core: $\leq 1100^{\circ}\text{C}$

Linear thermal expansion coefficient: $\leq 5 \times 10^{-6}/^{\circ}\text{C}$ (tested at $20-400^{\circ}\text{C}$)

2. Ultra-Low Thermal Conductivity

Thermal conductivity: $0.035 \text{ W}/(\text{m}\cdot\text{K})$ @ 200°C (GB/T 10294)

Thermal bridge elimination: Stainless steel thermal break bolts (U-value $\leq 0.5 \text{ W}/(\text{m}\cdot\text{K})$)

THERMAL PROCESS TUNNEL PANEL

3. Industrial-Grade Durability

Chemical resistance: Withstands pH 3-11 environments and organic solvents

Mechanical strength: Flexural strength ≥ 120 kPa (EN 12430)

4. Safety Protection

Fire rating: Class A1 (GB 8624)

Anti-static design: Surface resistance $\leq 10^6 \Omega$ (GB 12158)

Core Differences:

Thermal Process Tunnel Panels vs Ordinary Sandwich Panels

Parameter	Thermal Process Tunnel Panels	Ordinary Sandwich Panels
Operating Temperature	80-1100°C (Ceramic fiber core option)	-40 to 80°C (Limited by polymer cores)
Core Density	≥ 180 kg/m ³ (High-density mineral wool/ceramic fiber)	40-150 kg/m ³ (PU/PIR/EPS cores)
Thermal Shrinkage (400°C×24h)	$\leq 0.3\%$ (Inorganic fiber stability)	Not applicable (Core melt/deformation occurs)
Connection System	High-temp double tongue-and-groove + airtight locks (Stainless steel alloy joints)	Standard tongue-and-groove (Galvanized steel profiles)
Thermal Bridging Control	Stainless steel thermal break bolts (U-value ≤ 0.5 W/(m·K))	Uninsulated fasteners (U-value ≥ 15 W/(m·K))
Surface Protection	High-temp silicone/PVC co-extruded film (Resists chemical corrosion)	Standard PE/PET coating (Degrades above 120°C)
Maintenance Cycle	10+ years (Industrial-grade durability)	5-7 years (Limited thermal fatigue resistance)

COLD STORAGE PANEL



Cold storage panels **look similar to other sandwich panels**, but their performance depends mainly on the core material.

Key Differences:

- Thermal insulation performance
- Fire-resistance rating
- Structural characteristics
- Cost efficiency
- Material options for customization

Core material options:

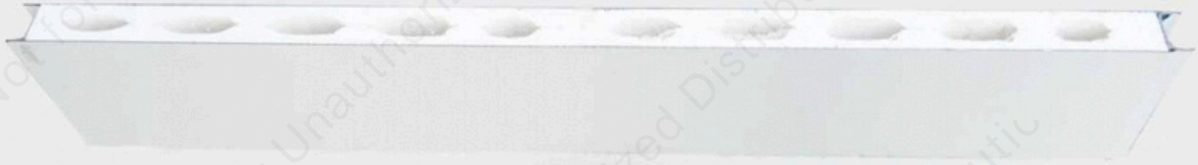
PIR(Polyisocyanurate Foam), PU, PU-Edged Rock Wool

COLD STORAGE PANEL

Cold Room Panel Core Material Comparison

Item / Type	PIR Panel	PU Panel	PU-Edged Rock Wool Core Panel
Core Material	High-density modified polyurethane (PIR)	Standard polyurethane	Central rock wool + PU edge sealing
Thermal Conductivity	≤ 0.020 W/m·K	≤ 0.024 W/m·K	Rock wool ≤ 0.040 ; edges sealed with PU
Insulation Performance	★★★★★ (Excellent)	★★★★★ (Very good)	★★★ (Moderate, with good edge insulation)
Fire Resistance	B1 ~ B2 grade	B2 grade	Rock wool A-grade; entire panel can achieve A-grade
Core Structural Stability	Extremely high	Medium to high	Relatively high (rock wool resists thermal deformation)
Water Vapor Resistance	Excellent	Good	Rock wool partially moisture-resistant; PU edges compensate
Applicable Temperature Range	-50°C ~ +50°C	-40°C ~ +45°C	-25°C ~ +50°C (Not suitable for ultra-low temperature)
Price Level	Highest	Medium	Relatively low
Recommended Application Scenarios	Ultra-low temperature cold rooms, medical cold storage	General cold storage and freezing rooms	Cold rooms/food partitions with high fire resistance requirements

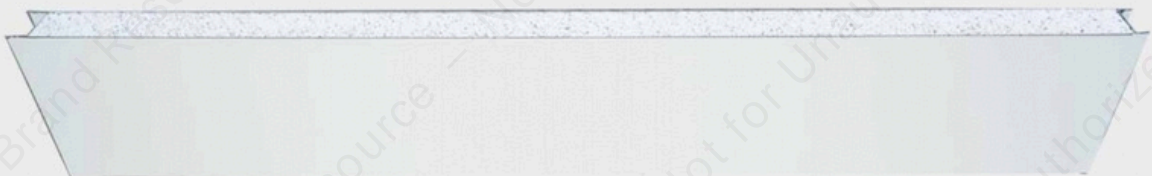
CLEANROOM PANEL (MECHANIZED)



Magnesium Sulfate Cleanroom Panel



Glass Magnesium Rock Wool Cleanroom Panel



Silicate Core Cleanroom Sandwich Panel

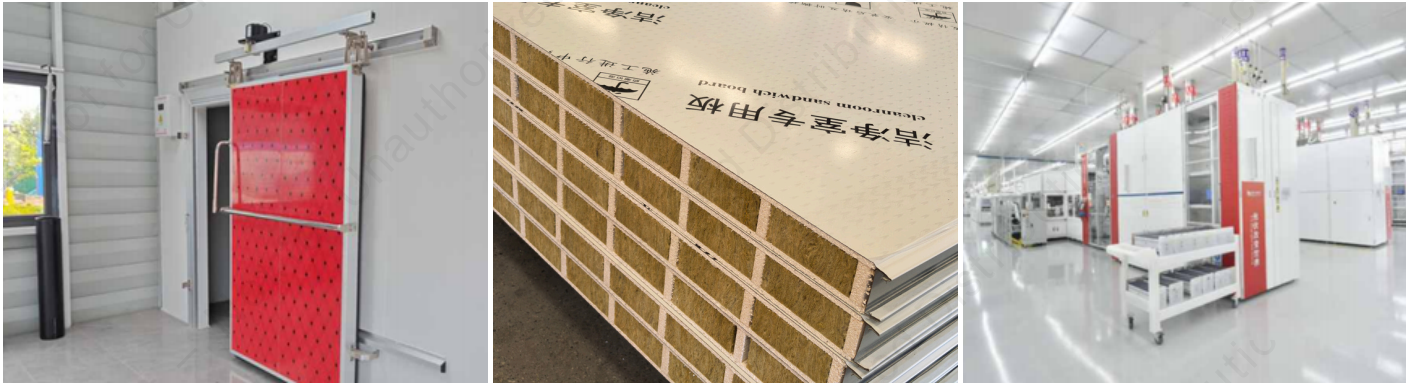


Hollow-Core Glass Magnesium Cleanroom Panel



Rock Wool Cleanroom Panel









CLEANROOM PANEL (MECHANIZED)











Surface Options	<ul style="list-style-type: none"> - Pre-painted colored steel - PVC film coated steel - Stainless steel
Core Materials	<ul style="list-style-type: none"> - Rock wool - Magnesium oxide board - Aluminum honeycomb - Paper honeycomb - PU, etc.
Thickness Range	<ul style="list-style-type: none"> - 50 mm - 75 mm - 100 mm - Customized options available
Key Advantages	<ul style="list-style-type: none"> - Smooth, dust-free surface, easy to clean - High fire resistance (up to Class A) - Excellent thermal and sound insulation - High mechanical strength, quick installation - Modular customization for various cleanroom classifications
Applications	<ul style="list-style-type: none"> - Electronics cleanrooms - GMP pharmaceutical plants - Food-grade workshops - Hospital operating rooms - Cosmetics factories - Research laboratories - Other controlled environments

EASY STEPS TO ORDER

Start Your Order Today

 Inquiry →  Quotation →  Sample → 
Contract & Payments →  Production →  Packing & Balance →  Shipment & Documents →  After-sales

-  **Inquiry** : Provide product specifications (material, size, coating, color, quantity, application).
-  **Quotation** : Get formal quotation with price, lead time, payment, and other details.
-  **Sample & Drawing** : Confirm samples or drawings for customized colors/patterns.
-  **Contract & Payments** : Sign PI/contract and pay deposit to schedule production; Special customized products require full payment in advance.
-  **Production & QC** : Manufacturing with strict quality control, third-party inspection available.
-  **Packing & Balance** : Packed to international standards, and settle balance payment.
-  **Shipment & Documents** : shipment arranged with documents, receive full set of shipping documents.
-  **After-sales** : Technical support, long-term supply and project services.

WHY CHOOSE US

Uncompromising Quality

Strict quality control and testing ensure durability, corrosion resistance, and consistency.

Tailored Solutions

Customized sizes, coatings, and finishes to meet unique project needs.

Competitive Value

Advanced manufacturing and efficient supply chain deliver cost-effective solutions.

Sustainable Commitment

Eco-friendly production and long life cycles support greener construction.

Global Support

Reliable logistics and professional support ensure timely delivery worldwide.





76 Bazhen Aveue, Chengdu, Sichuan, China
info@ecosteel.com
www.ecosteel.com