

ECO-FICIENT™

INSULATED METAL PANELS

OUR PANELS MAKE THE *difference*



Insulated Metal Roof and Wall Systems

MBCI's Eco-ficient™ panels are an ideal choice for your building projects. The panels, commonly referred to as IMPs, consist of two single-skin metal panels and foamed-in-place insulation. Eco-ficient™ panels provide superior R-values resulting in exceptional thermal efficiency and enhanced energy performance.

Eco-ficient™ panels provide numerous benefits, advantages and incentives for buildings, designers and owners. Using IMPs reduces energy consumption and decreases greenhouse gas emissions. They contribute toward LEED Certification, which is becoming a requirement on many federal, state and municipal building projects. Eco-ficient panels also qualify as continuous insulation (ci) where required by the International Energy Conservation Code® and ASHRAE 90.1. Designers and owners may be eligible for potential tax credits. (Contact your local tax specialist for details.) For more information about our IMPs, visit us online at www.mbc.com/panel_eco-ficient.

Product Information

The foam core consists of non-chlorofluorocarbon (non-CFC) polyurethane continuous foam. The cell structure is 92 percent closed with a density of 2.0 pounds per cubic foot (minimum). This means the foam will not absorb water and is insect and rodent resistant.

Eco-ficient™ panels are attached to the structure of a building with concealed clips designed to eliminate thermal short circuits. They are also free from significant thermal bridging, which is commonly created by fasteners, joints and gaps, and can cause thermal transfer and underperformance of insulation assemblies.

MBCI Eco-ficient™ panels have achieved excellent test results for thermal resistance, air and water infiltration and fire. We provide full test data for each panel profile at the different width and thickness options.

ECO-FICIENT™ INSULATED BATTENLOK® FOR ROOF APPLICATIONS



- Appearance
 - Exterior profile has a 2" high standing seam with an embossed Mesa profile
 - Interior profile utilizes the Mesa pattern
 - Concealed clip attachment to structure
- Gauges
 - Exterior: 24- and 22-gauge stucco embossed
 - Interiors: 26-, 24- and 22-gauge stucco embossed
- Widths: 30", 36" and 42"
- Thicknesses: 2", 2 1/2", 3", 4", 5" and 6"
- Length: Standard 8' to 50'
- R-value: Maximum of R-42

ECO-FICIENT™ INSULATED R PANEL FOR ROOF AND WALL APPLICATIONS



- Appearance
 - Exterior skin is smooth as a standard and can be embossed as an option
 - Interior skin is roll-formed with our standard Mesa profile
 - 1-1/4" high major ribs at 12" on center
 - Through-fastened to structure
- Gauges
 - Exterior: 26-, 24- and 22-gauge
 - Interiors 26-, 24- and 22-gauge
- Widths: 36"
- Thicknesses: 1 1/2", 2", 2 1/2", 3", 4", 5" and 6"
- Length: Standard 35'
- R-value: Maximum of R-42

IMPs FOR WALL APPLICATIONS

ECO-FICIENT™ GRAND



- Appearance
 - Flush appearance provides monolithic look
 - Stucco-embossed exterior and interior skins
 - Light Mesa profile on interior skin
- Gauges
 - Exterior: 22-gauge stucco-embossed
 - Interior: 26-gauge stucco-embossed
- Widths: 36"
- Thicknesses: 2", 2 1/2", 3" and 4"
- Length: Recommended maximum is 32'
- R-value: Maximum of R-29

ECO-FICIENT™ ROYAL



- Appearance
 - Exterior and interior skins have Mesa profile
 - Panel designed for interior partition and exterior wall applications
- Gauges
 - Exterior: 26-gauge stucco-embossed; other gauges available upon request
 - Interior: 26-gauge stucco-embossed
- Widths: 36" and 42"
- Thicknesses: 2", 2 1/2", 3", 4", 5" and 6"
- Length: Recommended maximum is 40'
- R-value: Maximum of R-42

ECO-FICIENT™ CLASSIC



- Appearance
 - Contemporary styling ideal for custom-designed or conventional building construction
 - Exterior skin has 3/8" deep flutes at 8.4" on the center with minor ribs in between
 - Interior skin has Mesa profile
- Gauges
 - Exterior: 26-gauge stucco-embossed; other gauges available
 - Interior: 26-gauge stucco-embossed
- Widths: 36"
- Thicknesses: 2", 2 1/2", 3", 4", 5" and 6"
- Length: Recommended maximum is 40'
- R-value: Maximum of R-42

ECO-FICIENT™ VINTAGE



- Appearance
 - Exterior skin with Aztec-embossed pattern resembling old-world hand plaster
 - Interior skin stucco-embossed with Mesa profile
- Gauges
 - Exterior: 26-gauge Aztec-embossed; other gauges available
 - Interior: 26-gauge stucco-embossed
- Widths: 42"
- Thicknesses: 2", 2 1/2", 3" and 4"
- Length: Recommended maximum is 40'
- R-value: Maximum of R-28

ECO-FICIENT™ SUMMIT

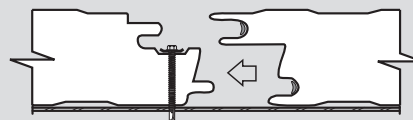


- Appearance
 - Flat with 1/16" deep minor striations in exterior skin
 - Striations provide a linear appearance while blending with the panel side joints
 - Interior skin has Mesa profile
- Gauges
 - Exterior: 24-gauge stucco-embossed; other gauges available
 - Interior: 26-gauge stucco-embossed
- Widths: 36" and 42"
- Thicknesses: 2", 2 1/2", 3", 4", 5" and 6"
- Length: Recommended maximum is 32'
- R-value: Maximum of R-42

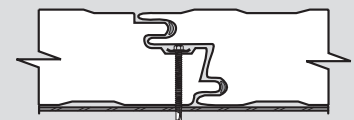
* Complete product support information is available online or by contacting your local sales representative, including color charts, sample guide specs, test data and installation manuals.

Typical Panel Interlock

The Eco-ficient™ panel utilizes a concealed clip and a double tongue-and-groove interlock to eliminate thermal breaks and provide superior resistance to moisture intrusion.



Clip and Fastener Assembly



Assembled Side Joint

Testing

MBCI's insulated panels have achieved excellent results under the following test procedures:

Thermal Resistance

- ASTM C515: K-factor of .127 at 75°F
- Foam Efficiency
 - R-value: 7.14 per inch at 75°F
 - 40°F vs. 75°F – Panels are more efficient at lower temperatures.
 - 4" panel: R-value = 28.5 vs. 32

Air and Water Infiltration

- ASTM E283 – Air Infiltration
 - Shall not exceed .06 cfm per SF of wall area at a static pressure of 12 psf.
- ASTM E331 – Water Penetration
 - No uncontrolled water penetration through the panel joints at a static pressure of 20 psf.
- AAMA 501.1 – Water Penetration
 - No uncontrolled water penetration through the panel joints when subjected to a 95 mph slip stream air flow and applications of water for 15 minutes.

Fire Testing

- ASTM E84 – Surface Burning Characteristics
 - Establish surface burning characteristics of the foam core. Flame spread at 20 and smoke developed at 145.
- FM Std. 4880, 50' – Room Fire Test
 - Wall panels are rated Class 1 for unlimited height structures – interior applications. (Full Scale Corner Test)
- FM Std. 4881 – Room Fire Test
 - Wall panels are rated Class 1 for unlimited height structures – exterior applications. (Full Scale Corner Test)

Physical Characteristics

- Freeze/Heat Cycling
 - No delamination, surface blistering or permanent bowing when subjected to cyclic temperature extremes of (-)20°F to (+)180°F for 21 eight-hour cycles.
- Humidity Test
 - No delamination or metal corrosion at the interface when subjected to a 140°F temperature and 100% relative humidity for a total of 1,200 hours.
- Autoclave Test
 - No delamination of the foam core from metal skins when exposed to 2 psi pressure at a temperature of 212°F for a total of two-and-a-half hours.

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Materials and Coatings

Signature® 300

This coating is a fluorocarbon paint system formulated with 70 percent Polyvinylidene Fluoride (PVF2) resins. Fluorocarbon products use either Hylar 5000® (a registered trademark of Solvay Solexis) or Kynar 500® (a registered trademark of Arkema, Inc.) resins. The long-life finish offers the ultimate in color retention, film flexibility and durability. It is highly recommended for architectural applications.

Signature® 200

This paint system is a Modified Silicone Polyester paint system. These coatings offer excellent chalk and fade resistance, as well as good weathering characteristics for the commercial, industrial and institutional markets.

Warranties

Paint warranties are available for both Signature® 300 and Signature® 200 paint systems.



Houston, TX (Corporate) 877-713-6224 | Adel, GA 888-446-6224 | Atlanta, GA 877-512-6224
Atwater, CA 800-829-9324 | Dallas, TX 800-653-6224 | Indianapolis, IN 800-735-6224 | Lubbock, TX 800-758-6224
Memphis, TN 800-206-6224 | Oklahoma City, OK 800-597-6224 | Omaha, NE 800-458-6224 | Phoenix, AZ 888-533-6224
Richmond, VA 800-729-6224 | Rome, NY 800-559-6224 | Salt Lake City, UT 800-874-2404 | San Antonio, TX 800-598-6224

For current information, visit our website at www.mbc.com

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