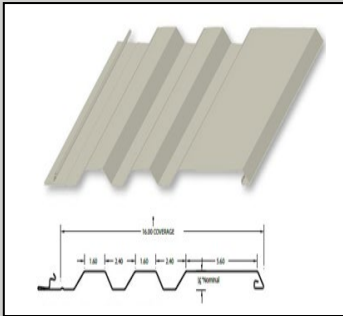


# Product Data Sheet



## DefendEX™ MWP16TP

### Metal Paneling

High-Performance Cladding

### Description

DefendEX™ MWP Series Concealed Fastener Panels are a high-performance cladding system, offered in a range of materials and profiles to meet the specific needs of a project. The DefendEX MWP Series unique design allows for rapid installation and a unique visual safeguard to ensure the panels are correctly interconnected.

The DefendEX MWP concealed fastener panel family consists of 11 panel profiles which all interlock together regardless of the gauge, color, or finish selected.

For standard color selection, consult the current EXCEPTIONAL Metals Color Chart.

Custom color services are available upon request.

Material only warranty available.

### Method of Application

1. Attachment of panels to a system of sub-girts or direct attachment to a smooth, solid substrate of DensGlass® or plywood is recommended.
2. Horizontal & vertical installations
3. Standardized lock joint design permits multiple profile integration
4. Concealed clips & fasteners
5. Optional stand-off clips provide ventilation cavity and drain plane behind panel

**NOTE:** Follow approved shop drawing installation details.

### Storage

- DefendEX metal panels should be stored in a well-ventilated, dry location, where no moisture can contact them. Moisture (From rain, snow, condensation, etc.) trapped between layers of material may cause water stains or white rust, which can affect the service life of the material and will detract from the appearance.
- If outdoor storage cannot be avoided, protect the panels with a ventilated canvas or waterproof paper cover. Do not use plastic, which can cause condensation. Keep the material off the ground in an inclined position with an insulator such as wood, or keep panels crated.
- Storage of end-use materials with protective film applied to the surface should be:
  - Wrapped/packaged to prevent exposure to direct UV, water, oils, or other contaminants.
  - Stored in an enclosed building or holding facility.
  - Within a temperature range of 45° - 90° F (7° - 32° C) and 20 - 80% relative humidity.
  - Less than six months with masking applied (warehouse storage and outdoor exposure combined).
  - Protective film may become brittle with long-term UV exposure.

## Precautions

- Oil canning is not a cause for rejection. Heavier gauges, narrower widths, striations, and embossing minimize oil canning.
- Sealant for end laps and lap joints shall be non-drying, non-toxic, and non-shrinking with a serviceable temperature of -60° - 212° F (-51° - 100° C).
- Quality, long-life butyl sealants work best as a gasket sandwiched between two pieces of metal. Non-acetic cured, silicone, color-matching sealants are recommended when voids must be filled. Sealants are not a substitute for proper assembly and workmanship.
- Exercise caution when handling to avoid injury or product damage.
- Refer to Safety Data Sheets (SDS) for safety information, including PPE.
- Immediately remove protective film after installation.**

Manufacturing Location: Anoka, MN



| Product Data           |                                                                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Property               | Value                                                                                                                                   |
| Panel Type             | Concealed Fastener Panels                                                                                                               |
| Material Options       | <u>G90 Galvanized Steel</u> : 22 ga (0.64 mm) and 24 ga (.0.79 mm)<br><u>Aluminum</u> : 0.040 in. (1.02 mm) and 0.050 in. (1.27 mm)     |
| Optional Materials     | <u>G90 Galvanized Steel</u> : 18 ga (1.44 mm) and 20 ga (1.11 mm)<br>Contact Amrize Technical Services prior to specified               |
| Color                  | Amrize standard or custom colors                                                                                                        |
| Finish                 | Kynar 500®/Hylar 5000® high performance fluorocarbon resinous coatings                                                                  |
| Optional Finish        | Anodized (aluminum substrate only)                                                                                                      |
| Sealant                | Factory- or field-applied butyl                                                                                                         |
| Clip                   | None required, options for 1/2 in. (12.70 mm) or 3/4 in. (19.05 mm) stand-off clip                                                      |
| Substrate              | Sub-girt System or smooth wall                                                                                                          |
| Standard Panel Surface | Smooth or stucco embossed                                                                                                               |
| Starter Pieces         | Stocked in 10 ft (3.05 m) length random color<br><u>G90 Galvanized Steel</u> : 22 ga (0.64 mm)<br><u>Aluminum</u> : 0.040 in. (1.02 mm) |

### MANUFACTURING NOTE:

- When mill-finished or anodized aluminum panels are ordered, no lancing on the top of the panel will be provided for clip/fastener connection.
- No lancing on steel panels 120 in. (3,048.00 mm) or less
- No lancing on aluminum panels 84 in. (2,133.60 mm) or less

| Product Size         |                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Property             | Value                                                                                                                                |
| Maximum Panel Width  | 16 in. (406.40 mm)                                                                                                                   |
| Minimum Panel Width  | 16 in. (406.40 mm)                                                                                                                   |
| Maximum Panel Length | <u>Steel</u> : 30 ft (9.1 m)<br><u>Aluminum</u> : 22 ft (6.7 m)<br><b>NOTE:</b> Contact Amrize Technical Services for longer lengths |
| Minimum Panel Length | 60 in. (1,524.00 mm)                                                                                                                 |



## Technical Information

| Property                  | Value             |
|---------------------------|-------------------|
| Air Infiltration          | ASTM E283         |
| Water Penetration         | ASTM E331         |
| Structural Performance    | ASTM E330 & E1592 |
| Dynamic Water Penetration | AAMA 501.1        |

## Typical Properties

| Material and Thickness                                                                                         | Metal Specification                                                                                                                                                                                                                                        | Available Finishes                                                                                |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <u>Aluminum</u><br>0.040 in. (1.02 mm)<br>0.050 in. (1.27 mm)                                                  | <b>Base Metal:</b> Aluminum<br><b>Minimum Yield:</b> 21 KSI (145 MPa)<br><b>Thermal Expansion:</b> $12.6 \times 10^{-6}$ in/in/ °F ( $22.68 \times 10^{-6}$ mm/mm/°C)<br><b>Modulus of Elasticity:</b> $10.0 \times 10^3$ x KSI (68.9 MPa)                 | Anodized<br>Kynar 500/Hylar 5000<br>Unpainted/Mill Finish                                         |
| <u>Zincalume®/Galvalume® Steel</u><br>24 ga (0.64 mm)<br>22 ga (0.79 mm)<br>20 ga (1.11 mm)<br>18 ga (1.44 mm) | <b>Base Metal:</b> AZ-50 Hot Dipped Galvalume<br><b>Minimum Yield:</b> 50 KSI (345 MPa)<br><b>Thermal Expansion:</b> $6.7 \times 10^{-6}$ in/in/ °F ( $12.06 \times 10^{-6}$ mm/mm/°C)<br><b>Modulus of Elasticity:</b> $29.0 \times 10^6$ x KSI (200 GPa) | Zincalume Plus/<br>Galvalume Plus/<br>Acrylume® - Clear<br>Acrylic Coated<br>Kynar 500/Hylar 5000 |

**NOTE:** Consult the appropriate base metal sheet and coil product data sheet for additional information on the base metal and coating. Not all materials and thicknesses are available from all locations.

Contact EXCEPTIONAL Metals Technical Services at (866) 337-4599 for further information.

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