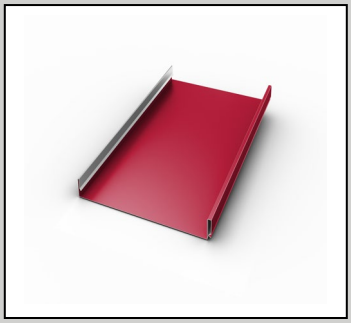
# Product Data Sheet



# DefendEX™ SL1750

## Metal Paneling

Standing Seam Panel for Architectural Metal Roofing

## Description

DefendEX™ SL1750 Roofing Panel (SL1750) is a factory-formed, continuous, interlocking, architectural standing seam metal roof panel with concealed clips and a proven seam design that snaps together for ease of installation. An optional pre-assembly, thermally-applied, in-seam sealant is available.

Standard color selections are listed in the current *EXCEPTIONAL® Metals Color Chart*.
Custom color services are available upon request.

The minimum slope requirement for a Warranty is 3:12.
Contact the Duro-Last® Quality Assurance Department for warranty information.

**NOTE:** SL1750 is designed and tested for roofing applications only. Any other installation is at the risk of the contractor and is not the responsibility of Amrize™ Building Envelope LLC.

## Method of Application

1. A smooth, solid substrate of plywood, OSB, or a rigid insulation board, mechanically fastened to a steel deck, is required for SL1750 panels.
2. SL1750 panels must be installed in a sequential order.
3. Prior to panel installation, application of an approved underlayment is required.

**NOTE:** Install assembly according to the *Metal Roofing Design Guide* and the *Metal Roofing System Application Guide* found on the EXCEPTIONAL Metals website. Follow approved 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 for 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.
- 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.
- Ensure that the load weight of product pallets do not exceed the capabilities of the structure.
- 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

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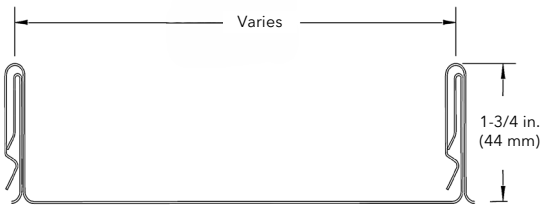
## Product Data

| Property | Value |
|---|---|
| Tapered Panels | No |
| Radius Panels | No |
| Stiffening Ribs | Optional |
| Striations | Optional |
| Sealant | Optional: In-seam, thermally-applied |
| Standard Panel Surface | Smooth |
| Optional Panel Surface | Stucco Embossed: 26 ga (0.48 mm)<br>Steel: 24 ga (0.64 mm) & 22 ga (0.64 mm)<br>Aluminum: 0.032 in. (0.81 mm) |
| Clip | SL1750 Clip |

## Product Size

| Property | Value |
|---|---|
| Panel Width | 8 – 24 in. (203.20 – 609.60 mm) |
| Optimal Panel Width | 18 in. (457.20 mm) |
| Seam Height | 1.75 in. (44.45 mm) |
| Minimum Panel Length | 36 in. (914.40 mm) |
| Maximum Panel Length | 600 in. (15.24 m) |




## Technical Information

| Property | Value |
|---|---|
| Uplift Resistance | UL 580, Class 90 |
| Air Infiltration | ASTM E1680 |
| Unfirm Static Air Pressure | ASTM E1592 |
| Water Penetration | ASTM E1646 |
| Fire Rating | UL 263, UL 790, & UL Class A Rated Assemblies |
| Hail Impact Rating | UL 2218, Class 4 |

**NOTE:** Testing is not applicable for all combinations of substrates, materials, and dimensions. All construction assemblies must be installed in accordance with the tested assembly. Refer to the *Metal Tested Assembly Guide* on the EXCEPTIONAL Metals website for tested assemblies and code listings.

Contact the Engineering Services Department for warranty requirements and additional Information.

## Typical Properties

| Material and Thickness | Metal Specification | Available Finishes |
|---|---|---|
| Aluminum<br>0.032 in. (0.81 mm) | **Base Metal**: Aluminum<br>**Minimum Yield**: 21 KSI (145 MPa)<br>**Thermal Expansion**: 12.6 x $10^{-6}$ in/in/ °F (22.68 x $10^{-6}$ mm/mm/°C)<br>**Modulus of Elasticity**: 10.0 x $10^{3}$ x KSI (68.9 MPa) | Anodized<br>Kynar 500®/Hylar 5000®<br>Unpainted/Mill-Finished |
| Galvalume® Steel<br>26 ga (0.48 mm)<br>24 ga (0.64 mm)<br>22 ga (0.79 mm) | **Base Metal**: AZ-50 Hot Dipped Galvalume<br>**Minimum Yield**: 50 KSI (345 MPa)<br>**Thermal Expansion**: 6.7 x $10^{-6}$ in/in/ °F (12.06 x $10^{-6}$ mm/mm/°C)<br>**Modulus of Elasticity**: 29.0 x $10^{6}$ x KSI (200 GPa) | Zincalume Plus/<br>Galvalume Plus/<br>Acrylume® – Clear<br>Acrylic Coated<br>Kynar 500/Hylar 5000 |
| AGSC Copper<br>16 oz (0.56 mm)<br>20 oz (0.69 mm) | **Minimum Content**: 99.9% copper, silver counting as copper, cold rolled from ingots of 122 alloy<br>**Thermal Expansion**: 9.3 x $10^{-6}$ in/in/ °F (1.674 x $10^{-5}$ mm/mm/°C)<br>Meets and/or exceeds ASTM B370 specification | Natural |

**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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