

## Unistrut International presents Unistrut Defender

**A breakthrough in corrosion resistance for the metal framing industry.**



**UNISTRUT  
DEFENDER**

Unistrut® International is proud to introduce a new, corrosion-resistant patent pending product line called **Unistrut Defender**. Unistrut Defender is designed for harsh environments, providing a service life between Hot-Dip Galvanized and stainless steel systems. Independent testing shows that Unistrut Defender is **THREE times more corrosion-resistant** than Hot-Dip Galvanized products. In addition, Unistrut Defender avoids the use of costly stainless steel hardware. Unistrut Defender is a great choice for harsh and corrosive environments. “Our performance feasibility trials tested Unistrut Defender against Hot-Dip Galvanized products in a continuous salt spray chamber”, says Jake Shaw, Product Manager of Unistrut Defender. “High performance products in the metal framing industry are typically only tested for 1,000 hours. Unistrut Defender products were still going strong after 2,800 hours in the chamber! By design we knew Unistrut Defender would perform well, but we were still excited to see how well it performed against Hot-Dip Galvanized products in a side-by-side test.”

Unistrut Defender brings a solution to the market that has never been available to framing and support applications in harsh environments. For more information, visit [www.unistrut.us](http://www.unistrut.us).

Part No.	Finish	Weight
P1066	<a href="#">DF</a>	59.40
P1066	<a href="#">GR</a>	56.00
P1066	<a href="#">EG</a>	56.00
P1066	<a href="#">HG</a>	59.40
P1066	<a href="#">ZD</a>	56.00

P1066	<a href="#">AL</a>	26.00
P1066	<a href="#">SS</a>	56.00

- DF is Defender (ASTM A1059 on connectors and fasteners or A1046 on channel)
- GR is phosphated and acrylic painted
- EG is electro galvanized
- HG is hot dip galvanized
- ZD is zinc dichromate
- AL is aluminum (plated??)
- SS is a 316 stainless part

### Unistrut Finish - Unistrut Defender™ (DF)

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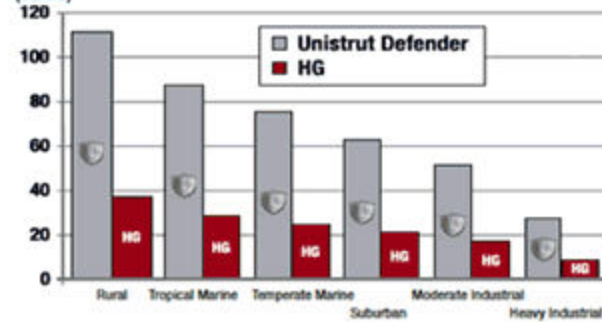
#### Unistrut Defender™ (DF): **ASTM A1046 or A1059**

Unistrut Defender is a combination of two proprietary material coatings conforming to ASTM standards A1046 and A1059.

#### Technical Notes:

1. To achieve full performance and cost benefits, Unistrut Defender must be used as a complete metal framing system. In addition, Unistrut Defender should not be put in contact with stainless steel materials due to a dissimilar metals condition that will create galvanic corrosion.
2. Some red staining may be observed over time on Unistrut Defender parts in corrosive environments. Red staining is superficial oxidation of the zinc/iron ions at the surface, and not corrosion of the substrate steel. This is noted in ASTM A1059 section 6.3.
3. Structural performance, including Slip and Pull-Out Loads, meets all Allowable Loads as specified in the Unistrut General Engineering catalog for carbon steels. Please reference the [Unistrut General Engineering Catalog](#) for this information.
4. One of the unique characteristics of Unistrut Defender is that it contains self-healing properties. If the strut is cut or scratched in the field, the finish will propagate into those areas eliminating the need for secondary touch-ups.

**SERVICE LIFE (YEARS)**  
**ANTICIPATED SERVICE LIFE**  
 (Time to 5% Red Rusing of the Steel Surface)

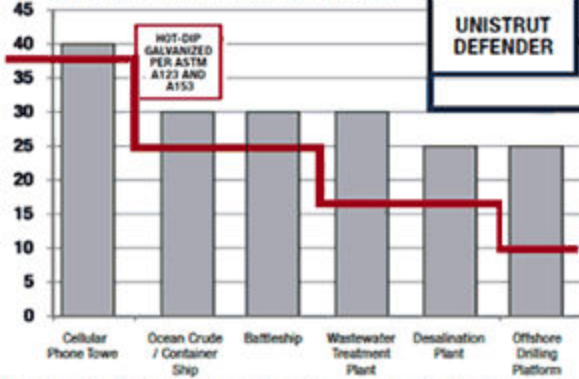


= Unistrut Defender

**ENVIRONMENT**

\*HG = Hot-Dip Galvanized per ASTM A123 and A153 coating service life as specified within the Metal Framing Industry

**TYPICAL APPLICATION DESIGN LIFE VS. ANTICIPATED SERVICE LIFE OFF-THE-CHART PERFORMANCE!**



\*Typical application design life is sourced from a number of different publications and is not true for all applications. Reference your project-specific requirements and environment for a true performance estimate.

**ASTM B117 TEST TO 5% RED RUST (RESULTS ARE IN HOURS):**

	1	2	3	4	5	6	Average
Hot-Dip Galvanized per ASTM A123 and A153	744	744	1,207	-	-	-	898
Unistrut Defender	2,856	3,000*	3,000*	3,000*	3,000*	3,000*	2,976 <i>.3X Improvement!</i>

\*Test stopped at 3,000 hours with samples still not reaching failure.

PHOTOS FROM ASTM B117 SALT SPRAY TEST: Hot-Dip Galvanized reached 5% red rust at an average of 898 hours.



5 of 6 samples still active at 3,000 hours!