

ArcelorMittal Solutions in Steel™ for Construction



ArcelorMittal

# Prepainted Galvalume™ Steel Fact Sheet

Introducing the Best of Both Worlds:  
Color and Corrosion Resistance



# Prepainted Galvalume™ Steel

The manufacture of ArcelorMittal prepainted Galvalume™ steel starts with the Galvalume substrate and its highly corrosion resistant 55% aluminum - 45% zinc alloy coating. The coated steel then passes through one of many available modern continuous coil coating lines that carefully apply and factory-bake a broad range of paint systems.

Prepainted Galvalume steel is made to rigid specifications, and quality tested to meet the steel and Galvalume coating requirements of A792/A792M. The paint system is applied to the paint manufacturers' specifications, and tested in accordance with stringent standards established by the National Coil Coating Association (NCCA).

This combination of long-lasting Galvalume sheet and modern high-performance paint systems results in durable, versatile, colorful, and economical building products.

Architects, building designers, and owners have turned to prepainted Galvalume steel because of the unlimited spectrum of colors, design flexibility, and long-term durability, all of which enhance the appearance, life, and value of buildings. Over 400 million square meters (40 billion square feet) of prepainted Galvalume sheet covers buildings in all types of climates and environments in North America, Europe, Asia, and Australia.

Prepainted Galvalume comes with a factory applied, baked-on finish. Processing on a paint line includes cleaning, followed by the application of a pretreatment, primer, and colorful finish coat, all in one continuous process.

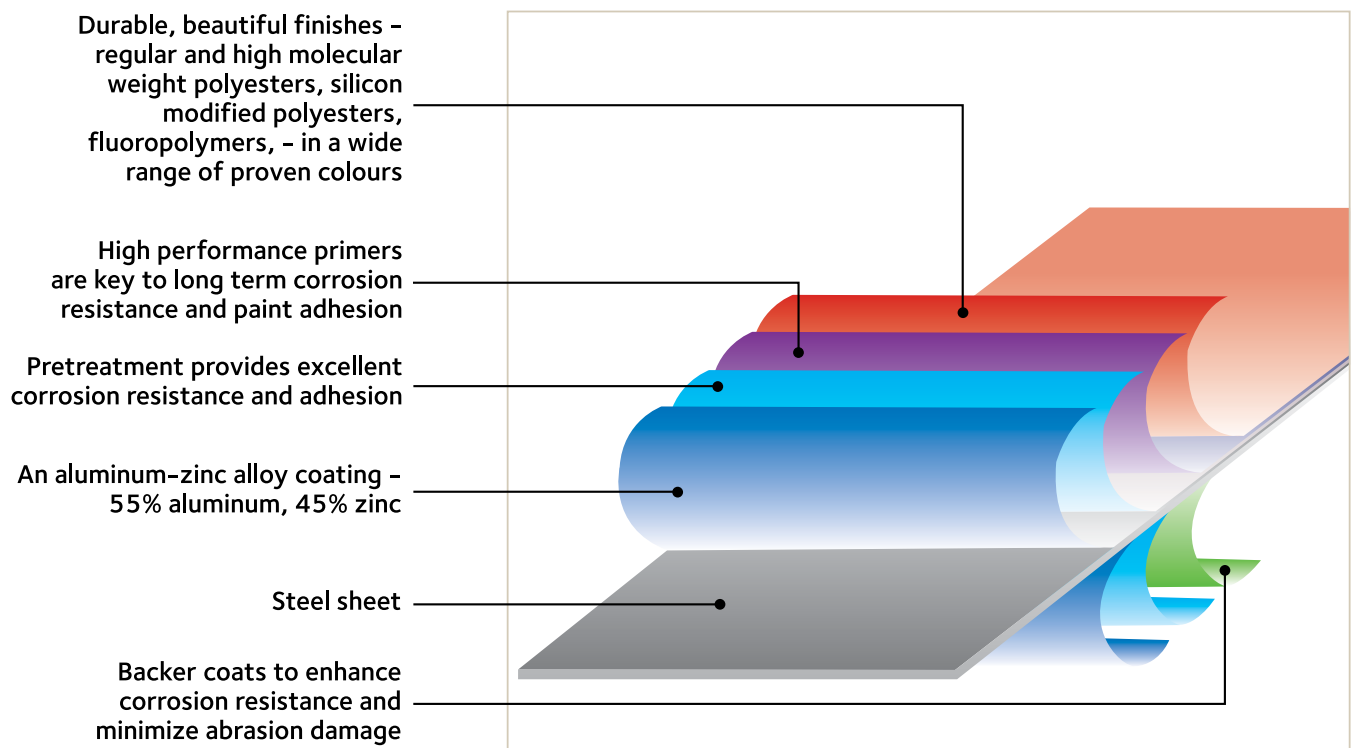
The schematic of Prepainted Galvalume sheet in Figure 1 pictorially demonstrates the following product construction features.

Galvalume sheet, with its highly corrosion resistant 55% aluminum - 45% zinc alloy coating, not only serves as the foundation for the paint system, but also provides long-term corrosion protection at edges, damaged sites, and tension bends. Building inspections have confirmed that Galvalume's resistance to corrosion is at least twice that of galvanized steel of equivalent coating thickness.

A chemical pretreatment is then applied to promote adhesion between the primer and the Galvalume coating. A high-performance flexible primer is then applied to the pretreated surface to enhance corrosion resistance, particularly at cut edges, scratches, and bends. The paint system is finished by applying a colorful, durable topcoat selected specifically for the application. Typical paint systems include polyesters (regular and high molecular weight), silicon modified polyesters, and fluoropolymers Kynar/Hylar.

The unexposed side is typically pretreated and coated with a wash coat or backer coat.

Figure 1: Prepainted Galvalume™ System



## Benefits of ArcelorMittal Prepainted Galvalume™

Creativity is enhanced when designing projects using a vast palette of colors, allowing buildings to stand out strikingly or to blend in and complement the surroundings.

Prepainted Galvalume steel blends well with most other building materials. It is available in a variety of thicknesses and profiles, ranging from shallow corrugated to complex shapes, from standing seam to hidden fasteners, and from curved and foam-filled to flat-faced profiles.

This versatility allows it to be used to match or co-ordinate with textures and patterns produced by most other building materials, including exposed concrete, wood, and glass curtain wall systems.

With the combination of field-tested paint systems, on top of the superior corrosion resistance of Galvalume coating, prepainted Galvalume steel has proven durability. Paint systems have been developed and proven over the past 30 years across the entire spectrum of environments in North America, including the temperature extremes of the Prairies and the corrosive acid rain, industrial, and marine conditions of the United States and Canada.

Prepainted Galvalume steel is economical. It offers the economics of a lightweight structurally strong roll-formed product, allowing structures to be designed with efficient insulation packages and erected cost effectively any time of the year. Prepainted Galvalume steel, with all its inherent advantages, is typically available at a similar price per square meter (same gauge) as prepainted galvanized steel. Creativity, versatility, durability, and economy – the proven reasons to choose Prepainted Galvalume.

## Handling & Job Site Considerations

Building products made from Prepainted Galvalume steel should be kept dry in transit and covered during storage at the job site. Bundles should be stored above ground at a slight angle, to prevent water or condensation build up between adjacent sheets. For advice on other job site considerations such as transit abrasion, removing installation debris, field cutting sheets, compatibility with other building accessories, insulation, joining, and sealing, refer to “Galvalume Sheet Steel – A Guide To Best Practices” also obtainable from ArcelorMittal.

## Maintenance

With a little care and attention during service, Prepainted Galvalume sheet will provide extended service life. Although factory applied, durable paint finishes for building panels will last many years, they should be cleaned thoroughly on a routine basis at least once a year. Applications where the paint finish is washed by rain do not require this maintenance. For additional information on cleaning procedures and touching-up damaged paint areas, refer to “Prepainted Galvalume Sheet – A Guide To Good Practices”. To obtain a copy of this best practice guide, contact ArcelorMittal.



## Product Availability

### Sizes Available

**Thickness:**  
0.012" (0.30 mm) to  
0.090" (2.28 mm)

**Width:**  
49.5" (1257 mm) maximum

### Qualities

ASTM A792/792M  
Commercial Steel  
Structural Steel  
Special Forming Steel

### Standard Coating Weights

AZ50 (50 oz/ft<sup>2</sup>) or  
AZM 150 (150 g/m<sup>2</sup>)  
  
Other coating weights also  
available.

**GALVALUME**™  
STEEL

## Where is Prepainted Galvalume™ Steel used?

Prepainted Galvalume steel is ideal for a wide range of painted applications, especially when superior atmospheric corrosion resistance is required.

Applications such as pre-engineered buildings, architectural panels, roofing, siding, cladding, and many other building components all benefit from ArcelorMittal prepainted Galvalume steel.

Prepainted Galvalume steel is available in a broad range of proven colors and a variety of proprietary and non-proprietary paint systems.

Paint systems should be specified with assistance from ArcelorMittal.



## Guidelines for Selection of Fasteners for use with Prepainted Galvalume™ Steel Sheet

### Rural Atmosphere

1. 300 Series stainless steel or 300 Series capped-stainless steel washer combination
2. Aluminum-zinc alloy cast or capped head used with neoprene-coated aluminum or Type 303 stainless washer
3. Nylon capped head over zinc coated carbon steel shank
4. 1.0 mil zinc coated steel, with additional organic or inorganic coating

### Moderate Industrial Atmosphere

1. 300 Series stainless steel or 300 Series capped-stainless steel washer combination
2. Aluminum-zinc alloy cast or capped head used with neoprene-coated aluminum or Type 303 stainless washer
3. Nylon capped head over zinc coated carbon steel shank
4. 1.6 mil zinc coated steel, with additional organic or inorganic coating

### Heavy Industrial or Marine Atmosphere

1. 300 Series stainless steel or 300 Series capped-stainless steel washer combination
2. Aluminum-zinc alloy cast or capped head used with neoprene-coated aluminum or Type 303 stainless washer
3. Nylon capped head over zinc coated carbon steel shank
4. 1.6 mil zinc coated steel, with additional organic or inorganic coating

**Special Customer Note:** The information in this Fact Sheet is provided for the general guidance of customers and does not imply any warranty. Information provided is based on research conducted by ArcelorMittal and other organizations. Interpretation and/or use of this information is the sole responsibility of the user. For further details, contact ArcelorMittal USA or Canada.



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