

Perspectra Plus Series™

Quality and Performance Specification

Perspectra Plus Series™ is the preferred prepainted material for cladding and roofing applications in North America where long lasting paint performances are required. Perspectra Plus Series™ is the newest generation of paint in our Perspectra brand paint system.

An enhanced state of the art silicone modified polyester (SMP) paint system makes Perspectra Plus Series™ ideal for commercial and residential metal roofing, agricultural and industrial metal building components, pre-engineered metal building systems as well as rainware products.

1.0 Scope

The following specification shall apply to hot dipped metallic coated sheet steel prefinished with colours of proven durability and suitable for exterior exposure as delivered from the coil coater¹.

Perspectra Plus Series™ is a paint system using a silicone modified polyester (SMP) topcoat. It is designed for sidewall (vertical) applications and roofing (non-vertical) applications for the construction and manufacturing industry. Applications are limited to normal environments. It is not recommended for aggressive atmospheric exposures.

2.0 Base Metal

The base metal furnished before painting shall conform to one of the following specifications:

- (a) Zinc coated (galvanized) sheet steel conforming to the requirements of ASTM A653 or A653M as applicable.
- (b) 55% aluminum-zinc (Galvalume™) alloy coated steel sheet conforming to the requirements of ASTM A792 or A792M as applicable. The recommended minimum coating mass designations for use in exterior building applications are stated in ASTM A755/A755M.

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3.0 Paint Qualification Tests

3.1 Film Thickness

The exposed surface shall have a minimum dry film thickness of 22µm (0.9 mils). The unexposed or reverse side shall have a dry film thickness which will vary in accordance with the customer's requirements.

Test Method: ASTM D5796

3.2 Formability/Adhesion Test

When testing a representative sample at 20°C ± 10°C and using #610 Scotch cellophane tape, the paint system will show no loss of adhesion when subjected to a 3T bend and tape pull test.

Test Method: ASTM D4145.

Please note that this requirement does not apply to material ordered to ASTM A653M/A792M Grade 550 or ASTM A653/A792 Grade 80.

3.3 Gloss

The specular gloss shall be 30 ± 5 gloss units when measured with a Gardner 60° Glossmeter. When other than the standard gloss is ordered, the gloss range shall be mutually agreed upon prior to purchase.

Test Method: ASTM D523

¹To review the list of non-standard colours and their limited performance specification, please go to:

<https://dofasco.arcelormittal.com/what-we-do/markets/construction/publications.aspx>, section Prepainted (organic coated) steels

3.4 Humidity Resistance

The humidity resistance test shall be conducted at 100% relative humidity at a temperature of 38°C (100°F). After 1000 hours of exposure, the surface shall show no field blisters.

Test Method: ASTM D2247

4.0 Exterior Exposure (Weathering)

Each proven colour of Perspectra Plus Series™ will meet the following weathering standards for applications within Canada and the Continental United States (in the absence of aggressive fumes and/or other chemicals not normally encountered in the atmosphere). Weathering standards also exclude installations within 1,500ft or less from a salt water environment².

4.1 Film Integrity

During the first 40 years on vertical (walls) and non-vertical (roofs) applications, the paint film shall have zero evidence of cracking, flaking or checking to an extent that is apparent in ordinary outdoor visual observations.

4.2 Chalking

For the first 30 years, vertical installations will not chalk more than a #8 rating and non-vertical installations will not chalk more than #6 when measured per ASTM D4214, Method A.

4.3 Colour Change

For the first 30 years, vertical installations will not change colour more than 5 and non-vertical installations will not change more than 7 delta E colour units. Colour measurements are to be made per ASTM D2244 and only on clean surfaces after removing surface deposits and chalk per ASTM D3964. Colour change shall be measured on any accepted colourimeter designed to produce reflectance

readings in the Tristimulus Filter System of X, Y and Z based on the CIE values of illuminant C at 2° and measured in Hunter L, a, and b units.

5.0 Colour Match

It is commercially impossible for each lot of prefinished steel to be an identical visual match due to the coil coating process. Matching issues can be minimized with the following practices:

- Discuss large projects which could involve multiple production orders with your supplier
- Attempt to clad buildings with material from the same production lot. When different production lots must be used, minimize colour variation by inserting an elevation change or break in the building structure.
- Do not combine or mix Perspectra Plus Series™ with different paint systems on the same building despite production colours matching. The two paint systems will weather at different rates resulting in a noticeable colour difference over time.

Perspectra Plus™ is available in several standard colours, please refer to the colour card at link below




https://sadofascopeprod.blob.core.windows.net/media/0vgl31xz/ms-bay_59235_perspectra-plus-colour-chart_lr-5.pdf

²To learn more about Paint Performance Specification Conditions and Restrictions related to the Perspectra Plus Series™, please go to:

<https://dofasco.arcelormittal.com/what-we-do/markets/construction/publications.aspx>, section Prepainted (organic coated) Steels

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