

HF STEEL ROOFING PANELS SERIES

STANDARD SPECS

## 1 GENERAL

### 1.1 Scope

- .1 The following standards shall apply to hot dipped galvanized steel pre-finished with colors of proven durability and suitable for exterior exposure as delivered from the coil coater 10,000 Series (Kynar 500) paint systems. Application is limited to moderate exposure. It is not recommended for aggressive exposure.

### 1.2 Samples

- .1 Submit samples in accordance with section 01300- Submittals.

### 1.3 Paint Qualifications Test

- .1 Film Thickness
  - .1 The exposed surface shall have a dry film thickened of  $22.5 \mu\text{m} \pm 5 \mu\text{m}$  ( $0.9 \pm 0.2$  mils).
  - .2 The unexposed or reverse side shall have a dry film thickness with will vary in accordance with the customer's requirements.
  - .3 Test Method: ASTM D1005 or CGSB 1-GP-71.NCCA II-18.
- .2 Film Cure
  - .1 The baked film shall withstand 100 double MEK rubs in accordance with ASTM D5402.
- .3 Film Hardness (Pencil Method)
  - .1 The hardness of the paint film may be measured by means of Eagle Berol pencils using a flat round head applied at a  $45^\circ$  angle to the paint film. A minimum hardness of HB shall have be obtained. Pencil Hardness is specified as the first pencil number that will not rupture the paint film when tested as described above.
  - .2 Test Method: ASTM D3363 or NCCA II-12.
- .4 Humidity Resistance
  - .1 The humidity resistance test shall be conducted at 100 percent relative humidity at a temperature of  $38^\circ\text{C}$  ( $100^\circ\text{F}$ ).
  - .2 After 1000 hours of exposure, the surface may show only a few scattered blisters no larger than No. 8 (per ASTM D714).
  - .3 Test Method: ASTM D2247.

- .5 Formability / Adhesion Test
  - .1 When using a representative sample at  $20^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$  ( $70^{\circ}\text{F} \pm 5^{\circ}\text{F}$ ) using #600 Scotch cellophane tape, the paint system will show no loss of adhesion when bent  $180^{\circ}$  around a 3 mm (1/8 inch) diameter mandrel.
  - .2 This requirement does not apply to material which as ordered as ASTM A653 Grade 80 or ASTM A653M Grade 550.
  - .3 Test Method: ASTM D4145.
  
- .6 Gloss
  - .1 The specular gloss shall be  $25 \pm 5$  degrees when measured with a Gardner  $60^{\circ}$  Glossmeter. When other than the standard film build is ordered, the gloss range shall be mutually agreed upon prior to purchase.
  - .2 Test Method: ASTM D523

1.4 Exterior Exposure (Weathering)

- .1 For each proven color of proven durability in the 10000 Series, a production sample complying with the foregoing specification has been given exposure in Hamilton, Ontario, at  $90^{\circ}$  to the horizontal facing south and has either successfully met or will successfully meet the following weathering standards:
  - .1 Film Integrity
    - 1. During the first 30 years in normal roll-formed applications, and providing there is no evidence of compromise integrity due to fabrication, installation, or service, the paint film shall have shown no cracking, checking or loss of adhesion that is apparent in routine unaided visual observation.
  - .2 Chalking
    - .1 During the first 30 years, chalking shall not exceed #8 in the vertical installations and #6 in non-vertical installations when measured per ASTM D4214, Method D659.
  - .3 Color Change
    - .1 During the first 30 years of exterior exposure the color change in vertical application shall not exceed 5 color units, and in non vertical applications the color change shall not exceed 8 color units when measured per ASTM D2244. Color change is measured on any accepted colorimeter designed to produce reflectance readings in the Tristimulus Filter system so X, Y and Z based on the CIE values of illuminant C. (ASTM 3964; Hunter Lab Units)

- .4 Color Match
  - 1. It is commercially impossible for each lot of pre-finished steel to be of an identical match. Color match problems can be minimized if the following procedures are followed:
    - .1 Orders for large projects which could involve more than one production order should be discussed with the supplier one the basic on one lot
    - .2 Attempt to ensure that each building is clad with material from the same production lot.
    - .3 When a different production lot must be used for one elevation, such as could be involved in an addition, attempt to minimize color variation by inserting an elevation change or break in the building structure.

1.5 Shipping and Storage

- .1 It is to keep pre-finished steel dry in transit, storage and on site. The material is subject to wet storage stain and / or paint deterioration if moisture is allowed to remain between the laps sheets. Prefinished steel must not be outside. Ideal storage consists of a clean dry warehouse where the steel can be store so it can used one a first in, our basis. Plastic wrapping should not be used. Material which becomes wet should be used immediately and dried off in the process.

2 PRODUCTS

2.1 Materials

- .1 Ideal Roofing profile
  - .1 HF profile: 24 gauge in thickness, 20¼” wide.
  - or... HF profile: 26 gauge in thickness, 16” wide.
- .2 Base Metal
  - .1 The base metal furnished before painting shall conform to the following:
    - .1 Zinc coated (galvanized) sheet steel conforming to the requirements of ASTM A525 (coating designation G 90) or ASTM A525M (coating designation Z 275), as applicable.
- .3 Colors
  - .1 Series 10,000 (Kynar 500) color

3 EXECUTION

3.1 Application

- .1 Install roofing panels as per Ideal Roofing’s recommendations.
- .2 Clean steel cladding at completion of work. Remove all debris from adjacent surfaces.

End of Section