

# MS Colorfast45® Paint System

## ► GENERAL INFORMATION

The manner of application to be a two coat roll coated system including a premium MS Colorfast45® top coat over a properly cleaned and pre-treated substrate. The surface is to be streak free and smooth with no blistering or other imperfections. MS Colorfast45® on coated steel conforms to ASTM A 755 and ASTM A 924.

## ► SUBSTRATE

Substrate to be Hot Dipped Galvanized per ASTM A 653 or Galvalume® per ASTM A 792.

## ► FILM THICKNESS • ASTM D 1005

Topcoat finish consists of a primer with a dry film thickness of 0.20–0.30. Primary top coat shall have a dry film thickness of 0.70–0.80 mil. The reverse side of the panel shall have a primer coat with a dry film thickness of 0.20–0.30 mil and a pigmented backer coat with a dry film thickness of 0.30–0.40 mil. Total topside dry film thickness for the system shall be 0.90–1.10 mils. All measurements per accordance with ASTM D 1005.

## ► ABRASION RESISTANCE • ASTM D 968

Per ASTM D 968, Method A, MS Colorfast45® will pass 30 liters/mil, minimum of falling sand.

## ► BEND ADHESION • ASTM D 4145

Per ASTM D 4145, slight micro-cracking of finish and no loss of adhesion when taped with cellophane tape when subjected to a 2T diameter 180° bend test on 26 gauge galvanized steel or fabricator's roll forming operation not to include zinc coating failures.

## ► CHALK RESISTANCE • ASTM D 4214

No chalking greater than 8 rating on vertical applications (7 rating on non-vertical applications) per ASTM D 4214-89, Method A test procedure, after 2000 hour weatherometer test.

## ► CHEMICAL RESISTANCE • ASTM D 1308

No significant color change after 24 hours exposure to 10% solutions of hydrochloric and sulfuric acids, per ASTM D 1308, Procedure 7.2, after 2000 hour weatherometer test.

## ► CHIP RESISTANCE • ASTM D 3170

Rating of at least 5B, per ASTM D 3170.

## ► CLEVELAND CONDENSING CABINET • ASTM D 4585

No blistering or white rust after 240 hours at 140°F, with a 15 minute dry off period every 6 hours, per ASTM D 4585.

## ► COLOR CHANGE • ASTM D 2244

Finish coat color change not to exceed 5 Hunter units on vertical applications (6 rating on non-vertical applications) per ASTM D 2244 test procedure, after 2000 hour weatherometer test.

## ► CROSS-HATCH ADHESION • ASTM D 3359

No paint removal with cellophane tape after cross-scoring with eleven horizontal and eleven vertical lines 1/8" apart per ASTM D 3359.

## ► CURE TEST • ASTM D 5402

MS Colorfast45® is to be oven baked to withstand 100 double rubs of an MEK soaked cloth before exposing primer coat per ASTM D 5402.

# MS Colorfast45<sup>®</sup> Paint System

## ► **DIRECT AND REVERSE IMPACT ADHESION • ASTM D 2794**

No visible paint removal with cellophane tape after direct and reverse impact of 80-inch pounds, using 5/8" steel ball on a Gardner Impact Tester not to include zinc coating failures per ASTM D 2794.

## ► **EXTERIOR WEATHERING • ASTM D 4141**

Florida exposure (45° south) and EMMAQUA testing, per ASTM D 4141, Procedure C, both confirm superior exposure characteristics of MS Colorfast45.

## ► **FILIFORM CORROSION RESISTANCE • ASTM D 2803**

MS Colorfast45<sup>®</sup> will not sustain filiform corrosion, per ASTM D 2803.

## ► **FLAME SPREAD RATE • ASTM E 84**

MS Colorfast45 displays a flame spread classification of A (Class 1), when tested in accordance with ASTM E 84.

## ► **HARDNESS • ASTM D 3363**

Minimum pencil hardness is "F", using Eagle Turquoise pencils ASTM D 3363.

## ► **HUMIDITY RESISTANCE • ASTM D 2247**

No blistering, cracking, peeling, loss of gloss or softening of the finish after 1200 hours of exposure to 100% humidity at 100°F ±5°F, per ASTM D 2247.

## ► **KESTERNICH TEST • ASTM G 87**

No significant color change after 10 cycles in an SO<sub>2</sub> chamber (Kesternich Cabinet or equivalent), per ASTM G 87.

## ► **SALT SPRAY RESISTANCE • ASTM B 117**

Samples diagonally scored and subjected to 5% neutral salt spray per ASTM B 117, then taped with cellophane tape, 1000 hours no blistering, and no loss of adhesion greater than 1/8" from score line. Samples taped 1 hour after removal from test cabinet.

## ► **SPECULAR GLOSS • ASTM D 523**

Specular gloss is to be determined per ASTM D 523 at a glossmeter angle of 60°. MS Colorfast45 has a standard gloss range of approximately 25 to 40 gloss units but can be manufactured at a higher or lower range upon request.

## ► **TOPSIDE COLOR • ASTM D 1729**

MS Colorfast45<sup>®</sup> topside color is controlled by the use of an approved master standard, an approved Color Difference Meter or Spectrophotometer, and by a visual match under daylight conditions and horizontal light of a Macbeth Daylight booth per ASTM D 1729.

## ► **WEATHEROMETER TEST • ASTM D 822**

No checking, blistering, or adhesion loss of coating system after 2000 hours of accelerated weathering per ASTM D 822, ASTM G 151 and ASTM G 153.