

## SECTION 050513 – METAL FINISHES

### PART 1 - GENERAL

#### 1.1 MSU ISSUES

- A. The latest version of “Inspection of Products Hot Dip Galvanized after Fabrication: Including a New Section on Touch-Up and Repair” by the American Galvanizers Association shall establish the minimum requirements when not otherwise specified in this section.
- B. Shop paint all steel not to be galvanized with a rust inhibitive primer. Consideration should be given to high performance primers and top-coat finishes for exposed interior steel.
- C. LEED

Comply with LEED NC 3 Credit Requirements EQ Credit 4.1: Low-Emitting Materials: Adhesives and Sealants for the following:  
Interior Sealants and Adhesives: Maximum VOC content in accordance with South Coast Air Quality Management District (SCAQMD) Rule #1168, effective July 1, 2005 and amended January 7, 2005.

- 1) Interior Sealants: Maximum VOC 250 g/L
- 2) Contact Adhesive: Maximum VOC 80 g/L
- 3) Metal to Metal Adhesive: Maximum VOC 30 g/L
- 4) Multipurpose Construction Adhesive: Maximum VOC 70 g/L

#### 1.2 Related Sections include the following:

- 1. Division 05 Section PIPE AND TUBE RAILINGS
- 2. Division 05 Section METAL FABRICATIONS

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. The handling and storage of galvanized materials shall be in conformance with ASTM A123. To eliminate humid stains, the materials should be spaced to allow free circulation of air. Repair materials showing evidence of damage to zinc coating. If not repairable, material with damaged coating may be rejected.
- B. Galvanized materials subject to extended periods of storage in open, exterior locations will be given passivating treatment or light oiling to prevent humid storage stain.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Zinc for galvanizing shall conform to ASTM B6 as specified in ASTM A123.

## 2.2 FABRICATION

- A. Steel members, fabrications, and assemblies to be galvanized after fabrication by hot dip process shall be in accordance with ASTM A123. Weight of zinc coating will conform to requirements specified under “Weight of Coating” in ASTM A123 or ASTM A386, as applicable.
- B. Safeguard against steel embrittlement in conformance with ASTM A143.
- C. Safeguard against warpage or distortion of steel members in conformance with ASTM A384.
- D. Finish and uniformity of zinc coating and adherence of coating will conform to ASTM A123.
- E. Bolts, nuts, and washers, and iron and steel hardware components will be galvanized in accordance with ASTM A153. Weight of zinc coating will conform to requirements specified under “Weight of Coating” in ASTM A153. Nuts will be retapped after galvanizing to minimum diametral amounts specified in ASTM A563. Coat nuts with waterproof lubricant, clean and dry to touch. High strength bolts for structural steel joints will be galvanized in accordance with ASTM A325.
- F. The use of dissimilar metals will not be allowed.

## 2.3 REPAIRS AND PROTECTION

- A. Repair damaged galvanized surfaces by one of the following methods:
  - 1. Sprayed Zinc: Clean and preheat to assure freedom from loose material, moisture, oil, grease, or other foreign matter before applying zinc. Apply zinc coating by metallizing spray to clean and dry surfaces.
  - 2. Zinc-based solders and Wire: Clean to remove loose material and contaminants, and heat to approximately 572° F (300C). Apply zinc-alloy repair compound by spreading material over heated surface in accordance with compound manufacturer’s instruction. Remove repair compound residues with damp cloth or by rinsing with water.
- B. Dry film thickness of applied repair materials will be not less than galvanized coating thickness required by ASTM A120, A123, or A153, as applicable.

END OF SECTION 050513