

**TITLE: GALVAGRIT™ COATING ON GALVANIZED STEEL SURFACES**

**SCOPE:** This specification covers the performance qualities and application of a slip resistant coating material over steel surfaces and then hot dipped galvanized.

**1. Product Description:**

Galvagrit™ is an anti-slip steel surface covering 100% of the substrate. It consists of a random matrix, with a surface hardness of 35 to 55 on the Rockwell "C" scale and bond strength to the steel of at least 5,000 psi. After application, the material is then hot dipped galvanized.

a. Coefficient of Friction:

- i. The ADA requires a slip coefficient of friction (COF) of 0.6 for flat surfaces and 0.8 for ramps.
- ii. As measured by both ASTM C1028 and ASTM F1769, the COF is 1.00+ for both wet and dry conditions. Measured by ASTM E303 (roadway traction), the COF is greater than 0.65 under both dry and wet conditions.
- iii. Galvagrit™ is UL® slip resistant classified.

**2. Process:**

Slip resistant material applied to bare steel shall be a thermal spray coating (metalizing). This is a coating produced by a process in which molten or semi-molten particles are applied by impact onto a steel substrate. This results in a lenticular or lamellar grain structure resulting from the rapid solidification of small globules, flattened from striking a cold surface at high velocities. The product is then galvanized, fusing the friction resistant coating.

- a. The surface texture of the coating shall be: Coarse (equivalent to CAMI grit 40), Medium (CAMI grit 80), or Fine (CAMI grit 100).

**3. Materials:**

**Slip Resistant Material:** Material to be applied to mild steel shall be either: Alloys of Iron and Aluminum and/or Chromium. The alloy shall have a minimum Rockwell Hardness Scale of HRC 35. The wire used shall have a diameter of 1/16 in. (1.6mm).

**4. Surface Preparation:**

The steel surface shall be clean and free of oils and grease before it is metalized. The surface shall be grit blasted to SSPC Surface Preparation Specification 10. The piece shall be metalized within 6 hours of blasting. Oils and grease shall be removed by use of an aqueous alkaline solution and/or hand or power tool cleaning.

**5. Galvagrit™ Coat Application**

The metalizing applicator shall be capable of providing a deposit rate consistent with the surface texture required. Typical wire Coverage is 0.6-1.0 oz/sq.ft/mil with a typical bond strength of 6000 psi.

**6. Galvanizing:**

Galvanizing shall occur not more than two days after metalizing, during which time all material shall be kept under cover in order to minimize pickling due to excessive rust (causing delamination of the slip resistance material). All materials to be hot dipped galvanized shall be galvanized in accordance with ASTM A 123. Only the dry-kettle (pre-fluxing) process shall be used. An American Galvanizers Association trained Master Galvanizer shall be on the premises during the hot dipped galvanizing process.