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## Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all Specifier Notes when editing this section.

Section numbers and titles are from *MasterFormat* 1995 Edition, with numbers and titles from *MasterFormat* 2004 Edition in parentheses. Delete version not required.

### SECTION 07320 (07 32 19)

#### ZALMAG® STEEL ROOF/WALL TILES

Specifier Notes: This section covers Millennium Tiles, LLC ZALMAG® STEEL roof/wall tiles. Consult Millennium Tiles for assistance in editing this section for the specific application.

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. ZALMAG® STEEL tiles.

##### 1.2 RELATED SECTIONS

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- A. Section 07600 (07 60 00) – Flashing and Sheet Metal.
- B. Section 07700 (07 70 00) – Roof Specialties and Accessories (Roof and Wall Specialties and Accessories).
- C. Section 07920 (07 92 00) – Joint Sealants.

### 1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ASTM A 1046/A 1046M – 1Standard Specification for Steel Sheet, Zinc-Aluminum-Magnesium Alloy-Coated by the Hot-Dip Process.
- B. ASTM D 226 – 2Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- C. ASTM E 8 – 3Standard Test Methods for Tension Testing of Metallic Materials.

### 1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including surface preparation and installation instructions.
- C. Samples: Submit manufacturer's samples of ZALMAG® steel roof/wall tiles.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. Warranty: Submit manufacturer's standard warranty.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage: Store materials in clean, dry area in accordance with manufacturer's instructions.
- C. Handling: Protect materials during handling and installation to prevent damage.

### 1.6 WARRANTY

- A. Warranty Period: 40 years.

## PART 2 PRODUCTS

### 2.1 MANUFACTURER

- A. Millennium Tiles, LLC, 550 East Centralia Street, Elkhorn, WI 53121 Phone 262.723.7778 Fax 262.723.7629 Website [www.millenniumtiles.com](http://www.millenniumtiles.com) E-mail [info@millenniumtiles.com](mailto:info@millenniumtiles.com)

## 2.2 ZALMAG® STEEL ROOF/WALL TILES

### A. ZALMAG® STEEL Roof/Wall Tiles:

1. Description: Individual roof/wall tiles with 4-sided interlocking design, self-aligning tab, and concealed nailing strip with 2 holes.
2. Material: ZALMAG® STEEL.
  - a. Coating consists of Zinc, Aluminum, Magnesium and Silicon.
3. Size:
  - a. Large Tiles: 15 inches by 9-5/8 inches.
  - b. Accent Tiles: 7-3/4 inches by 9-1/4 inches.
4. Size Exposed to Weather:
  - a. Large Tiles: 14-1/2 inches by 8-3/8 inches.
  - b. Accent Tiles: 7-1/4 inches by 8-1/8 inches.
5. Weight:
  - a. Large Tiles: 1.05 lbs./sq. ft.
  - b. Accent Tiles: 1.10 lbs./sq. ft.
6. Thickness: 0.017" +/- .002" (26 gauge)
7. Density: 0.284 lbs./cu. in.
8. Temper: Hot Rolled
9. Tensile Strength: 50,000 psi.
10. Yield Strength: 27,600 psi.
11. Elongation: 22%
12. Rockwell Hardness: B 58
13. Thermal Conductivity BTU-in/hr-ft<sup>2</sup>-°F: 360
14. Ratings:
  - a. Wind: 110 mph.
  - b. Fire: Class A, B, and C.
15. ICBO Approval Number: 4995.

Specifier Notes: Specify Size & Type, select one.

16. Tile Size & Type
  - a. Accent tile
  - b. Large tile without shadow cup
  - c. Large tile with shadow cup (indentation)

## 2.3 ACCESSORIES

- ### A. Trim and Flashing: Same material and gauge as ZALMAG® tiles.

Specifier Notes: Edit the follow list as required.

1. Starter strip.
2. Valley.
3. Hip and ridge cap.
4. End wall.
5. Side wall.
6. Gable end.
7. Outside corner flashing.
8. False starter.

9. J-channel.
10. Continuous ridge.

Specifier Notes: Roof vent should be installed for roof needing a ridge vent system. Check with the local building code for roof venting requirements. Roof vent is available from Millennium Tiles.

- B. Roof Vent:
  1. Trim-Line Products part number 58786.
  2. Rigid-roll ridge vent, 7 inches wide.
- C. Underlayment: ASTM D 226, No. 30 asphalt-saturated felt.
- D. Self-Adhered Membrane Roofing Underlayment.
- E. Fasteners: Galvanized steel, ring-shank roofing nails.
  1. Minimum Length:
    - a. New Construction: 1-1/4 inches.
    - b. Existing Construction: 1-1/2 inches.
- F. Joint Sealants: Exterior-grade, high-temperature, silicone joint sealant. As specified in Section 07920 (07 92 00).

### **PART 3 EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine areas to receive ZALMAG® steel roof/wall tiles.
- B. Notify Architect of conditions that would adversely affect installation.
- C. Do not begin surface preparation or installation until unacceptable conditions are corrected.
- D. Ensure minimum roof slope of 3:12.
- E. Ensure roof deck is solid with a minimum thickness of:
  1. Plywood: 1/2 inch.
  2. Oriented Strand Board (OSB): 1/2 inch.

Specifier Notes: Edit the following paragraph as required. Delete the following paragraph for new construction or if an attic inspection is not required. Determine if a total existing roof tear-off is needed. Consult Millennium Tiles for more information.

- F. Inspect attic to determine if existing roof deck needs to be replaced.

#### **3.2 SURFACE PREPARATION**

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Existing Roof: Remove curled and loose tiles, bumps, buckles, dirt, debris, and other items which could adversely affect smooth installation of ZALMAG® steel roof/wall tiles and interlocking mechanisms that provide watertight characteristics.
- C. Ensure surfaces to receive ZALMAG® steel roof/wall tiles are smooth and even.

### **3.3 INSTALLATION**

- A. Install ZALMAG® steel roof/wall tiles in accordance with manufacturer's instructions.
- B. Due to slight surface color variation Millennium Tiles, LLC recommends installers pull tiles from Several boxes during the installation process to assure random variation.
- C. Install roof tiles to achieve wind resistance of 110 mph.
- D. Install roof/wall tiles to provide watertight installation.
- E. Use specified fasteners at spacing in accordance with manufacturer's instructions.
- F. Prevent Electrolysis:
  - 1. Prevent dissimilar metals and corrosive nonmetallic materials from coming into direct contact with ZALMAG® steel materials.
  - 2. Do not allow water to flow from dissimilar metals to ZALMAG® steel materials.
- G. Underlayment: Install underlayment in accordance with manufacturer's instructions.
- H. Self-Adhered Membrane Roofing Underlayment:
  - 1. Install self-adhered underlayment in accordance with manufacturer's instructions.
  - 2. Install self-adhered underlayment at valleys and eaves.
- I. Install trim and flashing in accordance with manufacturer's instructions.
- J. Joint Sealants:
  - 1. Install joint sealants as specified in Section 07920 (07 92 00).
  - 2. Install joint sealants at overlapping flashing and exposed fastener heads.

### **3.4 PROTECTION**

- A. Protect installed ZALMAG® steel roof/wall tiles to ensure that, except for normal weathering, tiles will be without damage or deterioration at time of substantial completion.

**END OF SECTION**