

Custom Metal Roofing, Inc. d/b/a



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Technical Bulletin

Tests for Impact Resistance of Roof Covering Materials

UL 2218

Impact Resistance Class 4

Class 4 formed coated Steel Panels designate Type Coated steel panels (surfacing) identified as “Multi-Rib”, “Master-Lok”, “R”, “Medallion-Lok”, “Medallion”, “Medallion I Batten”, “Medallion II Batten”, “Meridian”, “5V-Crimp”, “Mega-Rib”, “Maxima 212”, “Maxima 216”, “Maxima 218”, “Maxima 318”, “Maxima 324”, “Maxima 1.5”, “Metalogic-2000”, “Mirage”, “M-Cor”, “Multi- Cor”, “Max-Rib”, “Tuff-Rib”, “Mac-Rib”, “U”, and “Maxima ADV”

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Technical Bulletin

UL Construction #560

Tuff-Rib

UL580 Class 90

1. **Metal Roof Deck Panels*** - No. 29 MSG min coated steel. Maximum panel width 36 in. Rib height max 3/4 in. Panels continuous over two or more spans. Panels to overlap 6 in. at endlaps and must occur adjacent to a support when plywood decking (Item 3) is not used. A bead of sealant may be used at panel endlaps and sidelaps.
Custom Metal Roofing, Inc. dba B & M Metals "Tuff-Rib"
2. **Fasteners** – (Screws) - For panel attachment to wood deck (Item 3) fasteners to be No. 1/4-14 x 1-1/2 in. Type AB, or No. 14 x 1-1/2 in. long Type A when substructure is plywood decking (Item 3). When 2 x 4 lathing (Item 3A) is used, fasteners may be any of the following: 1/4-14 x 1-1/2 in. long Type AB, No. 14 x 1-1/2 in. long Type AB, No. 14 x 1-1/2 in. long Type A, or No. 10 x 1-1/2" in. long Woodgrip. Fasteners to be installed 24 in. OC along the length of the panel. Fastener spacing across the width of the panel to be 9 in. OC beginning 1-3/4 in. from the centerline on one side of each major rib. Fastener spacing at panel ends to be in a 1-3/4, 5-1/2, 3-3/4, 5-1/2, 3-3/4, 5-1/2, 3-3/4, 5-1/2 in.
- 2A. **Fasteners** – (Screws and Nails) – For attachment of plywood deck (Item 3) to joists (Item 5) fasteners to be min No. 6 x 1-7/8 in. long bugle head screw or annular ring shank nails. Spacing to be 6 in. OC at plywood edges and 12 in. OC at intermediate supports.
- 2B. **Fasteners** – (Screws) – For attachment of 2 x 4 lathing (Item 3A) to joists (Item 5) fasteners to be min No. 8 x 3 in. long bugle head screw, two screws per attachment point.
3. **Substructure** – (Plywood) – Plywood decking to be a nom 5/8 in. thick, exposure sheathing span C-D, 40/20 plywood. All butt joints to be sealed against leakage by using tape and/or caulk or with one-part urethane sealant.
- 3A. **Substructure** – (Lathing) – Lathing to be nominal 2 x 4 wood, No. 2 or better, spaced 24 in. OC max.
4. **Moisture Barrier** – (Optional) (Not shown) – Any suitable membrane to protect substructure (Item 3 or 3A).
5. **Joists** – Joists spaced at 2 ft., 0 in. OC when plywood decking is used and 48 in. OC when 2 x 4 lathing (Item 3A) is used, may be one of the following:
 - A. Nom 2 by 10 in. wood joists No. 2 or better.
 - B. Nom 2 by 4 in. wood when used on top cord of a wood truss, No. 2 or better.

Refer to General Information, Roof Deck Construction, (Roofing Materials and Systems Directory) for items not evaluated.

*Bearing the UL Classification Marking