UL Product iQ™

BXUV.P801 - FIRE-RESISTANCE RATINGS - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

BXUV - Fire-resistance Ratings - ANSI/UL 263

See General Information for Fire-resistance Ratings - ANSI/UL 263

Design No. P801

February 08, 2019

Restrained Assembly Ratings — 1, 1-1/2 and 2 Hr (See Item 6).

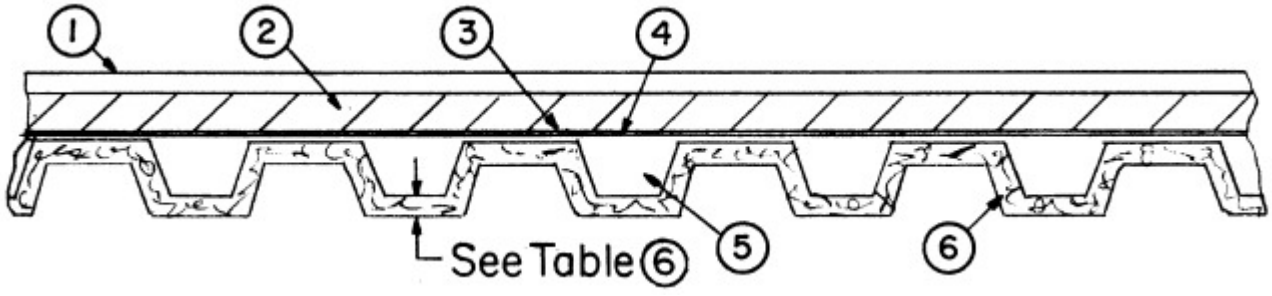
Unrestrained Assembly Ratings — 1, 1-1/2, and 2 Hr (See Item 6).

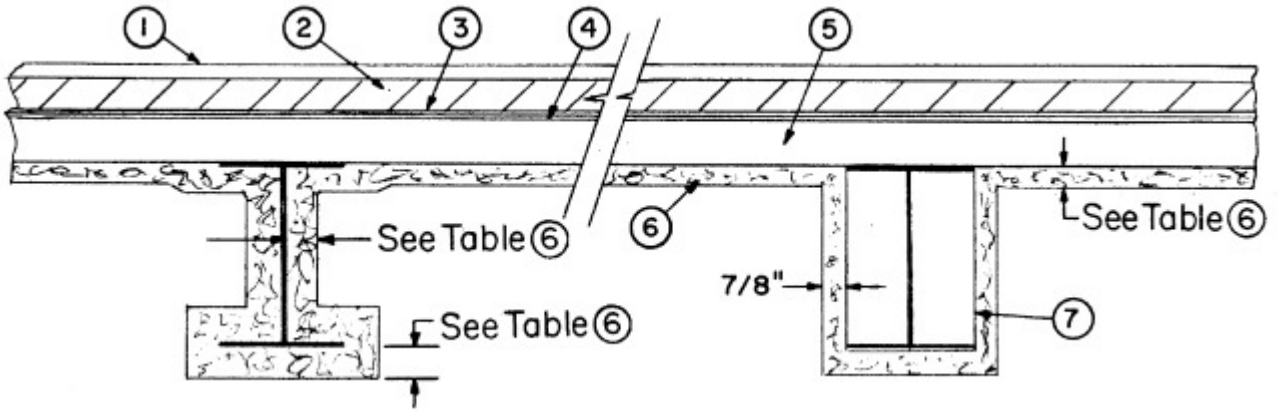
Unrestrained Beam Ratings (Direct) — 1, 1-1/2 and 2 Hr (See Item 6).

Unrestrained Beam Rating (Caged) — 1-1/2 Hr. (See Item 6).

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**





Steel Supports — W6X16 beams, min size. Or joist girders (not shown) — 20 in. min depth and 13 lb per lin ft min weight. Joist girders shall be designed and fabricated in accordance with the Specifications and Load Tables adopted by the Steel Joist Institute and revised to November 15, 1989. Or Type 12K3 joists, min size (not shown) or LH Series steel joists (not shown) of any size. Bridging in accordance with SJI Specifications, welded to top and bottom chords of each joist. Thickness of Spray-Applied Fire Resistive Materials specified for the joists is required for the bridging.

1. **Roof Covering* —** Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory (TEVT).

1A. **In lieu of Item 1, roof covering consisting of single-ply Roofing Membrane* —** that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory — Roofing Membranes (CHCI).

1B. **Metal Roof Deck Panels —** (Not shown) — In addition to or in lieu of Items 1 or 1A, the roof covering may consist of a mechanically fastened metal roof deck panel assembly. See Fire Resistance Directory **— Metal Roof Deck Panels** (CETW).

2. **Roof Insulation —**

A. **Mineral and Fiber Board* —** Applied in one or more layers, with or without adhesive applied between vapor barrier roof deck units, vapor barrier and board, and each layer of board. When more than one layer is required, each layer of board to be offset in both directions from layer below a min of 6 in. in order to lap all joints. Min thickness is 2 in. when Item 1A is used. Min thickness is 1 in. otherwise. Max thickness 3-1/2 in.
GAF — GAFTEMP Perlite.

JOHNS MANVILLE

ROCKWOOL — MonoBoard™, MonoBoard™ Plus, "MonoBoard Plus S", TopRock®DD, TopRock® DD Plus or TopRock DD Plus S.

SOPREMA INC — SopraRock®DD and SopraRock®DD Plus.

B. **Or Building Units* —** Applied in one or more layers with or without adhesive applied between vapor barrier and roof deck units, vapor barrier and board, and each layer of board. When more than one layer is required, each layer of board to be offset in both directions from layer below 6 in. min. Min thickness is 2 in. when Item 1A is used.
PITTSBURGH CORNING CORP — Thickness 1-1/2 in., Min.

3. **Adhesive* -(Optional) —** (Bearing the UL Classification Marking for Roof Systems (TGFU)) - The vapor retarder or the first layer of roof insulation may be secured with adhesive to the steel crest surfaces. Also used to attach the first layer of insulation to vapor retarder and each additional layer of insulation. Applied at a max rate of 19.8 g/ft^2. When FAST 100 adhesive is used, additional **Spray-Applied Fire Resistance Materials* (CHPX)** is required on the deck for the 1-1/2 and 2 hr Unrestrained Assembly Ratings. The thickness specified for the deck shall be increased by 1/16 in. for 1-1/2 hr Unrestrained Assembly Rating and 1/4 in. for 2 hr Unrestrained Assembly Rating.
CARLISLE SYNTEC INCORPORATED — FAST 100

4. **Vapor Barrier (Sheathing Material*) —** Optional — Vinyl-film or paper scrim vapor barrier applied with adhesive to the steel roof deck, overlapped approx 2 in. on sides.

5. **Steel Roof Deck —** (Unclassified) — Min 1-1/2 in. deep and 24 or 30 in. wide, galv or painted fluted steel deck. When unclassified painted deck is used, Item 5A must be used.
Min gauge is 22 MSG. Flutes approx 6 in. OC crests approx 3-5/8 in. wide, valleys approx 2 5/8 in. wide. Attached to supports with welds spaced 12 in. OC. Adjacent units button-punched or welded together 36 in. OC along side joints; or,

Classified Steel Floor and Form Units* — Noncomposite 1-1/2 or 3 in. deep, 24, 30 or 36 in. wide, galv units. Min gauge is 22 MSG. Spacing of welds attaching units to supports shall not exceed 12 in. OC. Adjacent units button-punched or welded together 36 in. OC along side joints.
CANAM STEEL CORP — Type P-3606 or P-3615.

CANAM STEEL CORP — Types B, BI, F, NS, NI. Units may be galv/ptd or ptd/ptd.

MARLYN STEEL DECKS INC — Types B, F, N, NV.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Types BD, FD, ND.

ROOF DECK INC — Types A, B-1, B-2 or F.

VULCRAFT, DIV OF NUCOR CORP — 24, 30 or 36 in. wide Types 1.5A, 1.5B, 1.5BI, 1.5PLB, 1.5F, 3N, 3NI, 3.0PLN, 3NL-32, 3NI-32, 3PLN-32; units may be ptd/ptd for 1 and 1-1/2 hr Assembly and Beam Ratings. Types BW, B High Strength, BW High Strength, N. Units may be ptd/ptd

5A. **Metal Lath —** Not Shown — Required on unclassified painted steel roof deck. Rib lath, galv or painted, min 2.5 lb/sq yd, with ribs facing down, fastened to deck using No. 8 by 1/2 in. wafer head self-drilling, self-tapping coated steel screws spaced max 15 in. OC in both directions with lath edges overlapped approx 3 in.

6. **Spray-Applied Fire Resistive Materials* —** Applied by spraying with water in one or more coats to final untamped thicknesses as shown below, to steel surfaces which are free of dirt, oil and scale. Use of adhesive is required. Tamping is optional. Min avg density 13 pcf with min ind density 11 pcf for Types D-C/F, II, or II HS. Min avg and min ind densities of 22 and 19 pcf, respectively, for Type HP.For method of density determination refer to Design Information Section.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Protection Thkns In.		
			Deck#	Beam	Joist
1	3/4+	1	3/4	9/16	1-1/2
1	1	1	1	9/16	1-1/2
1-1/2	1-1/2	1-1/2	1-1/2	15/16	1-7/8
2	1-1/2	1-1/2	1-13/16	15/16	1-7/8
2	2	2	1-13/16++	1-3/8	2-1/4
			1-7/8		

#The required minimum thickness of Spray-Applied Fire Resistive Materials on the steel deck is increased by 1/16 in. for 1-1/2 hr Unrestrained Assembly Rating and 1/4 in. for 2 hr Unrestrained Assembly Rating when Item 3 is used.

+Becomes 1 hour when spans of structural supports are less than or equal to 7 ft.

++Lower thickness applicable when spans of structural supports are less than or equal to 7 ft.

Maximum Unrestrained Assembly Rating with caged beam protected with 7/8 in. protection material in illustration is 1-1/2 hr.

Beams protected with the thicknesses listed in table above may be sprayed direct (contour) or optionally caged for all rating periods.

ISOLATEK INTERNATIONAL — Type D-C/F, HP, II, or Type II HS, Type EBS or Type X adhesive/sealer.

6A. **Metal Lath (Optional) —** Not Shown — Metal lath used to facilitate the spray application of the Spray-Applied Fire Resistive Material to the steel joists. Diamond mesh, 3/8 in. expanded steel, min 1.7 lb/sq yd fastened to one side of joists using No. 18 SWG steel wire, located at midheight of every other member or 18 in. OC whichever is less. Both sides of lath must be completely coated with Spray Applied Fire Resistive Material, but with no min thickness requirements.

6B. **Glassfiber Mesh —** (Not Shown) — As an alternate to metal lath (Item 6A), min 3/32 in. square mesh, coated fiberglass scrim fabric, weighing a min of 1.9 oz/sq yd shall be attached to one side of each joist web member. The method of attachment must be sufficient to hold the mesh and Spray-Applied Fire Resistive Materials material during application and curing of the material. An acceptable method of attaching the mesh is by embedding the mesh in min 1/4 in. long beads of hot melted glue. The beads of glue shall be spaced min 12 in. OC along the top chord of the bar joists. Another method of attachment is the use of 1-1/4 in. long, 1/2 in. wide hairpin clips formed from 0.064 in. diam steel wire, alternating from top to bottom of the joist web member.

7. **Beam Cage —** No. 9 SWG wrapped around beam spaced 16 in. O.C. Metal lath 3/8 in. rib, 3.4 lbs. per sq yd) fastened by No. 18 SWG located 1 in. from each end of bottom flange of beam and 1 in. from top and bottom flange on each side of beam.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Last Updated on 2019-02-08