

BXUV.L701 - 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.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

[See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances](#)

[See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances](#)

Design No. L701

August 01, 2022

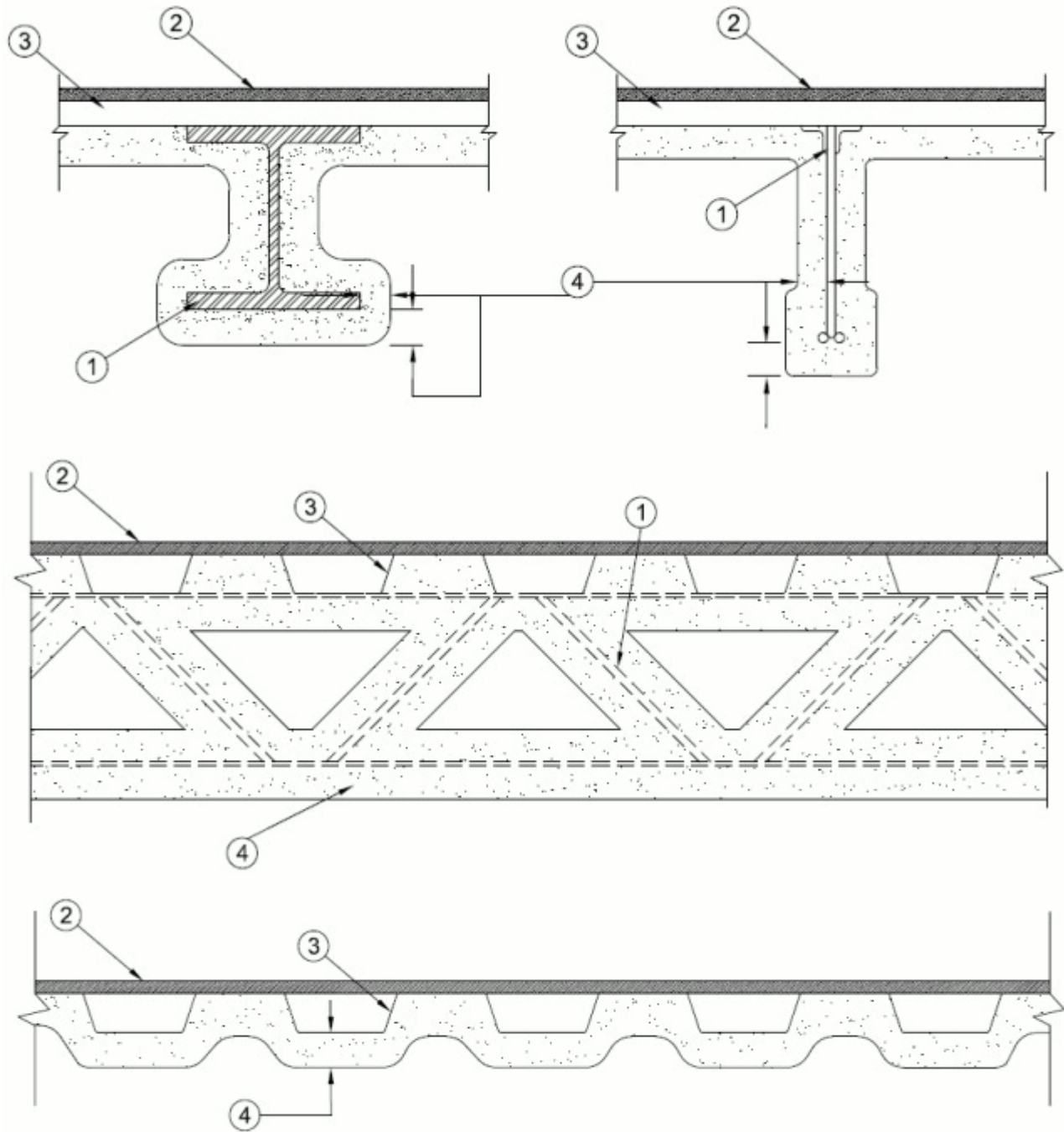
Restrained Assembly Ratings — 1, 1-1/2, and 2 Hr (See Item 4)

Unrestrained Assembly Ratings — 1, 1-1/2, and 2 Hr (See Item 4)

Unrestrained Beam Ratings — 1, 1-1/2, and 2 Hr. (See Item 4)

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.**



1. **Steel Supports** — Min W6x16 steel beam or 10K1 steel joist (See Item 4).

2. **Building Units*** — 3/4 in. thick wood fiber boards fastened to the steel deck according to the manufacturer's installation instructions.

CORNERSTONE SPECIALTY WOOD PRODUCTS LLC — Types ResinDek LD, ResinDek MD, ResinDek SD, ResinDek HD

3. **Steel Roof Deck — (Unclassified)** — Min 1-1/2 in. deep and 30 or 36 in. wide galv or painted fluted steel deck. When unclassified painted steel roof deck is used, Metal Lath (Item 4B) is required. Flutes 6 in. OC with crest width ranging from 3-5/8 to 5-1/16 in. Min gauge is 22 MSG. Ends overlapped at supports min 1-1/2 in. and welded to supports at deck laps and a max of 12 in. OC between sides of units. Side laps of adjacent units welded, button-punched or secured together with No. 12 by 3/4 in. long self-drilling, self-tapping steel screws spaced a max of 36 in. OC.

3A. **Classified Steel Floor and Form Units*** — (As an alternate to item 3) - Noncomposite, min. 1-1/2 in. deep, galv units, min gauge is 22 MSG. Ends overlapped at supports min 1-1/2 in. and welded to supports at deck laps and a max of 12 in. OC between sides of units. Side laps of adjacent units welded, button-punched or secured together with No. 12 by 3/4 in. long self-drilling, self-tapping steel screws spaced a max of 36 in. OC.

ASC STEEL DECK, DIV OF ASC PROFILES L L C — Types BH-36, BHN-36, BHN-35-1/4, DGB-36, B-36, BN-36, BN-35-1/4, DGN-32, N-32, NN-32, 2WH-36, 2WHS-36, 3WxH-36, 3WH-36. All units may be galvanized or Prime Shield™. Non-cellular decks may be vented designated with a "V" suffix to the product name.

CANAM GROUP INC — Type P-3606 or P-3615; 36 in. wide Types 1.5B, 1.5BI; 24 in. wide Types 3N, 3NI.

CANAM STEEL CORP — Types B, NS. Units may be ptd/ptd.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Types B, BI, F, N, NI, NW32, and NW32I. Units may be ptds/ptd or glvanized.

STEEL MASTERS INTERNATIONAL DEPENDABLE STEEL — 36 in. wide Types 2WH-36, 3WH-36. Units may be phos/painted or galvanized.

VERCO DECKING INC - A NUCOR CO — Deck types PLB, HSB, PLN3, HSN3, PLN, N; FORMLOK™ deck types PLB, B, PLN3, N3, PLN, N, PLW2, W2, PLW3, W3. Units may be galvanized or phos./ptd. Deck may be vented or non-vented.

VULCRAFT, DIV OF NUCOR CORP — Types 1.5F, 1.5B, 1.5BI, 1.5PLB, 3N, 3NI, 3.0 PLN, 3NL-32, 3NI-32, 3PLN-32, ptd/ptd units may be used for ratings up to 2 hr; Types BW, N. Type BW may be ptd/ptd.

4. Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in more than one coat to the thickness shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 15 and 14 pcf, respectively, for Types 300, 300AC, 300ES, 300HS, 300N, 3000, 3000ES and SB. For Types 400AC and 400ES min average and min individual density of 22 and 19 pcf, respectively. For method of density determination, see Design Information Section, Sprayed Material. Spray-Applied Fire Resistive Materials on steel deck shall cover screw tips by 1/2 in. min. Use of adhesive (Item 7) is required. The min thicknesses of Spray-Applied Fire Resistive Materials required for various fire resistance ratings are shown in the table below:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Protection Mtl Thkns In.		
			on Deck#	on Beam	on Joist
1	1	1	1-7/16	7/16	1
1-1/2	1-1/2	1-1/2	2	9/16	1-3/16
2	2	2	2-5/8	13/16	1-3/16

BERLIN CO LTD — Types 300, 300ES, 300N or SB.

GREENTECH ASIA PACIFIC SDN BDH — Types 300, 300ES, or 300HS

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Types 300, 300AC, or 400AC.

ISOLATEK INTERNATIONAL — Types 300, 300AC, 300ES, 300HS, 300N, SB, 400AC, 400ES, 3000 or 3000ES.

NEWKEM PRODUCTS CORP — Types 300, 300ES, 300N, or SB.

4A. (As an alternate to Item 4) Spray-Applied Fire Resistive Materials* — Applied by mixing with water and spraying in more than one coat to the thickness shown below, to steel surfaces which are clean and free of dirt, loose scale, and oil. Min average and min individual density of 22 and 19 pcf for Type 400. For method of density determination, see Design Information Section, Sprayed Material. Spray-Applied Fire Resistive Materials on steel deck shall cover screw tips by 1/2 in. min. Use of adhesive (Item 7) is required. See Item 4 for required thicknesses.

GREENTECH ASIA PACIFIC SDN BDH — Type 400

GREENTECH THERMAL INSULATION PRODUCTS MFG CO L L C — Type 400.

ISOLATEK INTERNATIONAL — Type Type 400.

NEWKEM PRODUCTS CORP — Type 400.

4B. **Metal Lath** — (Not Shown) 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.

5. **Glass Fiber Mesh** — (Optional - Not Shown) — May be used to facilitate the spray application of the protection material to the steel bar joists. Min 3/32 in. sq 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 fire protection 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.

5A. **Metal Lath** — (Optional — Not Shown) — In lieu of Item 5, diamond mesh, 3/8 in. expanded steel, min 2.5 lb/sq yd fastened to one side of joists using No. 18 SWG steel tie wire, located at the midheight of every other web member or 18 in. OC whichever is less. Both sides of lath must be completely coated with Spray-Applied Fire Resistive Materials but with no minimum thickness requirements.

6. **Bridging** — (Not Shown) — Min 1-1/4 by 1-1/4 by 1/8 in. thick steel angles welded to top and bottom chords of each joist. Number and spacing of bridging angles per Steel Joist Institute specification. Bridging coated with the same thickness of Spray-Applied Fire Resistive Materials as the joist to a min distance of 12 in. beyond each side of the joist.

7. **Adhesive*** — (Not Shown) - Applied to steel roof deck in accordance with manufacturer's instructions.

ISOLATEK INTERNATIONAL — Type EBS or Type X

*** 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 2022-08-01

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

UL Solutions permits the reproduction of the material contained in Product iQ subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from Product iQ with permission from UL Solutions" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "©2022 UL LLC."