

# BXUV.G595 - 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 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](#)

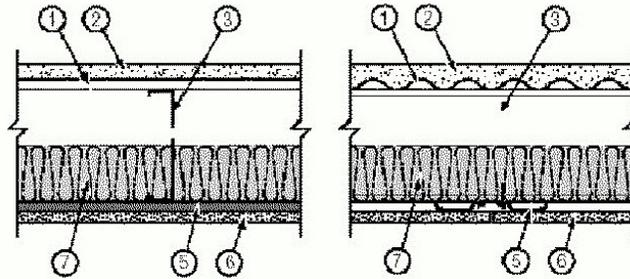
### Design No. G595

April 24, 2020

#### Unrestrained Assembly Rating — 1 or 2 Hr. (See Item 2 and 2A)

**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 Deck** — Min 9/16 in. deep, 22 MSG galv corrugated fluted steel deck. Attached to each joist with #10 3/4 in. long screws at each side joint and no more than 12 in. OC between sides.

**2. Floor Topping Mixture\*** — Compressive strength to be 3500 psi min. Minimum thickness to be 1 in. as measured from the top plane of the deck or the top plane of the Floor Mat Material\*. Refer to manufacturer's instructions accompanying the material for specific mix design. An ethylene vinyl acetate adhesive may be applied to the steel deck prior to the installation of the floor topping mixture at a maximum application rate of 0.025 lbs./ft.<sup>2</sup>.  
**HACKER INDUSTRIES INC** — Firm-Fill CMD

**Floor Mat Materials\*** — (Optional) - Floor mat material nom 5/64 in. (2 mm) thick adhered to steel deck with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. (25 mm) over the floor mat.  
**HACKER INDUSTRIES INC** — Hacker Sound-Mat I.

**Alternate Floor Mat Materials** — (Optional) — Floor mat material nom 1/4 in. (6mm) thick adhered to steel deck with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.  
**HACKER INDUSTRIES INC** — Hacker Sound-Mat II.

**Alternate Floor Mat Materials** — (Optional) — Floor mat material nom 1/8 in. (3mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1 in. (25mm)  
**HACKER INDUSTRIES INC** — FIRM-FILL SCM 125

**Alternate Floor Mat Materials** — (Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1 in. (25mm)  
**HACKER INDUSTRIES INC** — Type FIRM-FILL SCM 250

**Alternate Floor Mat Materials** — (Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1-1/4 in. (32mm)  
**HACKER INDUSTRIES INC** — FIRM-FILL SCM 400

**Alternate Floor Mat Materials** — (Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the steel deck. Floor topping thickness shall be a min of 1-1/2 in. (38mm)  
**HACKER INDUSTRIES INC** — FIRM-FILL SCM 750

**3. Structural Steel Members\*** — The proprietary joists are channel-shaped, 9-1/4 in. min depth. Joists are fabricated from min No. 16 MSG galv steel. Joists spaced max 24 in. OC. Joists attached to rim joist with a minimum of three #10 3/4 in. long self-drilling screws at the rim track clip to the outside of the web joist, and a #10 1/2 in. long screw through the top and bottom flange of the joists to the top and bottom flange of the rim track. At rim joist splices bearing on supports, rim joists are connected using an overlapping section of a 12 in. long splice plate (a joist piece), with a minimum of six 3/4 in. long self-drilling #10 screws to each rim piece.  
**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Type SSCI floor joists, SSRT rim joists or Type SSTT rim joists. When Type SSTT rim joists are used, secured to preformed clip tabs in accordance with manufacturers installation instructions.

**4. Joist Bridging** — Not shown — Installed immediately after joists are erected and before construction loads are applied. The structural bridging, Type CEMCO Sure Bridging, consisting of No. 18 MSG galv steel, 2-1/2 in. wide by 25-1/2 in. long with 1-5/16 in. long legs structural bridging staggered between the steel joists and attached to the bottom joist flange with two #10 1/2 in. long self-drilling screws at each end tab of bridging. Solid bridging consisting of cut to length joist sections placed between outer joists and at center joist with 8 ft OC max spacing. Solid bridging is seated in the structural bridging and is screw-attached at joist web using Type CEMCO Sure-Support Clips (1-1/2 in. by 1-1/2 in. by 7 in. long, 16 MSG, min 50 ksi support clip) with three #10 3/4 in. long self-drilling screws per leg on one side and the other side with Type CEMCO Sure-Support Clips (4 in. by 1-1/2 in. by 7 in. long, 16 MSG, min 50 ksi support clip) with three #10 3/4 in. long self-drilling screws per leg.

**5. Resilient Channels** — 1/2 in. deep, formed of 25 MSG galv steel, spaced 12 in. OC perpendicular to joists. Channel splices overlapped 4 in. beneath steel joists. Channels secured to each joist with 1/2 in. Type 5-12 low profile screws. Channels oriented opposite at wallboard butt joints (spaced 5-1/2 in. OC) as shown in the above illustration.

**5A. Alternate Steel Framing Members** — (Not Shown) - As an alternate to Item 5, main runners, cross tees, cross channels and wall angle as listed below:

a. **Main Runners** — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires inserted through holes drilled through web of joists and twist-tied.

b. **Cross Tees** — Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels** — Nom 4 or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC.

d. **Wall Angle or Channel** — Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.

**CGC INC** — Type DGL or RX.

**USG INTERIORS LLC** — Type DGL or RX.

**6. Gypsum Board\*** — Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 5) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle-head screws spaced 8 in. OC in both the field and the perimeter, and 1-1/2 in. from side edges of the board. When Steel Framing Members (Item 5A) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long Type S bugle-head screws spaced 8 in. OC in the field and along end joints. Panels fastened to main runners with 1 in. long Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 2 ft OC.

**CGC INC** — Types C, IP-X2, IPC-AR

**CGC INC** — Type ULIX

**UNITED STATES GYPSUM CO** — Types C, IP-X2, IPC-AR, UUX

**USG BORAL DRYWALL SFZ LLC** — Type C

**USG MEXICO S A DE C V** — Types C, IP-X2, IPC-AR

7. **Batts and Blankets\*** — Glass fiber insulation, min 3-1/2 in. thick, bearing the UL Classification Marking for Surface Burning Characteristics and/or Fire Resistance. Insulation fitted in the concealed space, draped over the resilient channel/gypsum panel ceiling membrane. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

8. **Joint System** — Not Shown — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints.

**\* 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 2020-04-24

---

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's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory 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 the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2022 UL LLC"