

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. D603

November 18, 2022

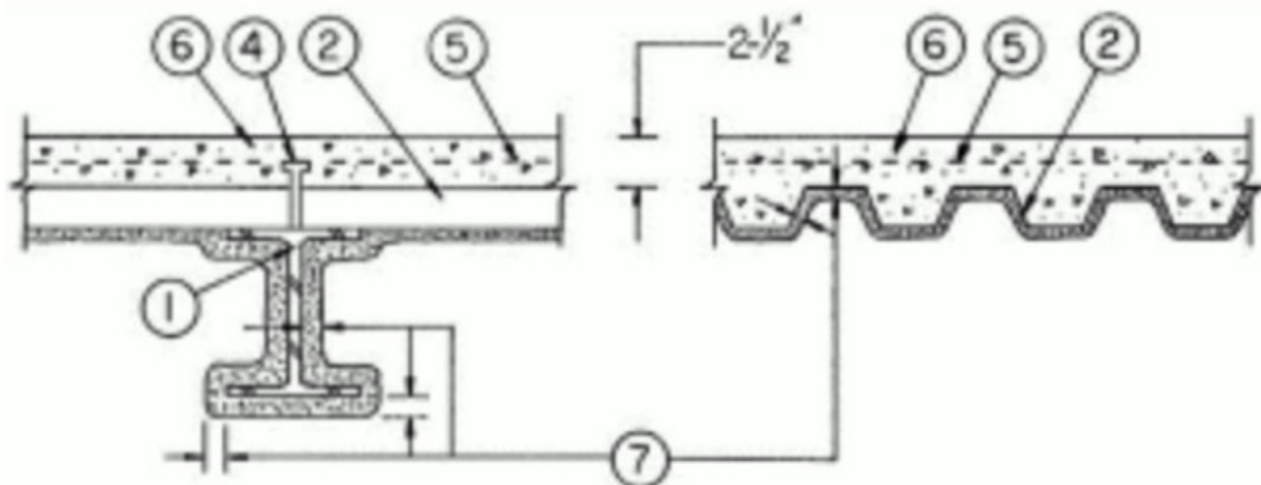
Restrained Assembly Rating — 1, 1-1/2 and 2 Hr. (See Items 2 and 7)

Unrestrained Assembly Rating — 1, 1-1/2, and 2 Hr. (See Items 2 and 7)

Unrestrained Beam Rating — 1, 1-1/2, and 2 Hr. (See Items 2 and 7)

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 Beam — Minimum steel beam size as described in Item 7. Beams shall be primed with a single component alkyd primer to an approximate dry film thickness of 152 microns (6 mil).

2. **Steel Floor and Form Units*** — 1-1/2, 2 or 3 in. deep, min 18 MSG galv fluted units. Spacing of welds attaching units to supports shall be 12 in. OC max. Adjacent units welded together at side joints and shall not exceed 36 in. OC. Steel Floor and Form Units shall be primed with an acrylic primer to an approximate dry film thickness of 102 microns (4 mil). For 1-1/2 hr Unrestrained Assembly Rating, clear span of units limited to 6 ft, 3-3/4 in. For 2 hr Restrained Assembly Rating, 2 hr Unrestrained Assembly Rating and 2 hr Unrestrained Beam Rating, clear span of units limited to 6 ft, 3-3/4 in.

INTSEL STEEL EAST LLC — 36 in. wide Types 1.5" COMPOSITE/FLOOR, 2" COMPOSITE/FLOOR, 3" COMPOSITE/FLOOR.

VULCRAFT, DIV OF NUCOR CORP — 36 in. wide Types 1.5 VL, 1.5 VLI and 36 in. wide Types 2 VLI, 3 VLI fluted units.

3. **Joint Cover** — (Not Shown) — Nom. 2 in. wide, pressure-sensitive tape, applied following the contour of floor units when butted over beams.

4. **Shear Connector Studs** — Optional — (Not Shown) — Studs, 3/4 in. diam, by 3 in. long for 1-1/2 in. deep form units to 5-1/4 in. for 3 in. deep units, headed type or equivalent per AISC specifications. Welded to top beam flange through steel form units.

5. **Welded Wire Fabric** — 6x6-W1.4xW1.4.

6. **Normal Weight or Lightweight Concrete** — Normal weight concrete: carbonate or siliceous aggregate, 147 plus or minus 3 pcf unit weight, 3000 psi compressive strength, vibrated. Lightweight aggregate concrete: expanded shale, clay or slate aggregate by rotary-kiln method, 109 plus or minus 3 pcf unit weight, 3000 psi compressive strength, vibrated, 4 to 7 percent entrained air. Min thickness as measured to crests of steel floor and form units, 2-1/2 in.

7. **Mastic and Intumescent Coatings*** — One component material spray-applied in one or more coats as described in the application instructions. See tables below for appropriate final dry thickness and applicable rating. Thicknesses below include the primer.

Restrained Assembly Rating, Hr	Unrestrained Assembly Rating, Hr.	Min. Dry Film Thickness On Steel Deck	
		mils	mm
1	1	100	2.54
1-1/2	1-1/2	100	2.54
2	2	100	2.54

Restrained Assembly Rating, Hr.	Unrestrained Assembly Rating, Hr.	Unrestrained Beam Rating, Hr.	W8 x 28 Min. Dry Film Thickness On Beam	
			mils	mm
1	1	1	141	3.58
1-1/2	1-1/2	1-1/2	141	3.58
2	2	2	229	5.82

CONTEGO INTERNATIONAL INC — Type Contego HS, Type CON-RFB HS. Investigated for Conditioned Interior Space Purpose, Interior General Purpose, and Exterior Use

8. **Top Coat** — (Not Shown) — Required for Interior Conditioned Space Purpose, Interior General Purpose, and Exterior Use. Type Rustoleum K7786 Smoke Grey Top Coat applied at a minimum thickness of 127 microns (5 mil) over the intumescent material.

9. **Mineral Wool Insulation** — (Not Shown) — Min 6 pcf mineral wool insulation cut into pieces and firmly packed into, and completely filling the spaces between the flutes of the steel floor and form units and the top flange of the 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 2022-11-18

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: "©2024 UL LLC."