

BXUV.N652 - 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. N652

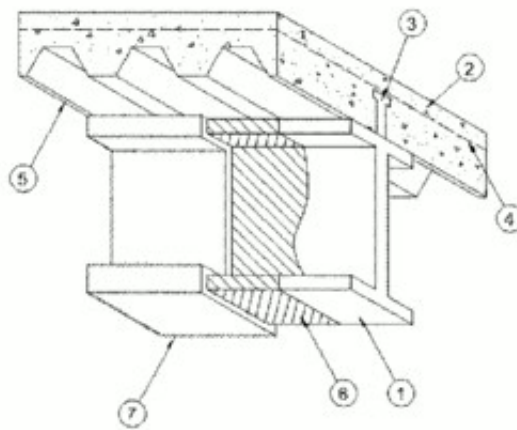
January 07, 2020

Restrained Beam Rating — 1, 1-1/2, 2 and 2-1/2 Hr (See Item 7)

Unrestrained Beam Rating — 1, 1-1/2, 2 and 2-1/2 Hr (See Item 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. **Beam** — Min size as shown in the table below (See Item 7). Beam shall be free of dirt, loose scale and oil.
2. **Normal Weight or Lightweight Concrete** — Compressive strength 4000 psi. For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 145 +/- 3 lbs / cu ft for normal weight concrete and 112 +/- 3 lbs / cu ft for lightweight concrete.
3. **Shear Connectors** — (Optional) Studs, headed type or equivalent per AISC specifications welded to the top flange of beam through the steel floor units.
4. **Welded Wire Fabric** — 6x6-10/10 SWG.
5. **Steel Floor Units** — 1-1/2, 2 or 3 in. deep fluted units, welded to beam.
6. **Primer Coating** — Beams primed with a single component alkyd primer to an approximate dry film thickness of 2 mils.
7. **Mastic and Intumescent Coating*** — One component material spray-applied in one or more coats as described in the application instructions to the thicknesses shown below. Flutes above beam to be completely filled with mineral wool insulation having a minimum density of 6 lbs / ft³. Thicknesses below include the 2 mils of primer.

Minimum Required Thickness (mil) for Unrestrained Beam Rating (min)

W/D	HP/A	60	90	120	150
0.52	258	95	NR	NR	NR
0.62	216	92	NR	NR	NR
0.72	186	88	NR	NR	NR
0.82	163	85	NR	NR	NR
0.92	146	82	NR	NR	NR
1.02	131	78	NR	NR	NR
1.12	120	75	NR	NR	NR
1.22	110	72	NR	NR	NR
1.32	102	68	NR	NR	NR

1.42	94	65	NR	NR	NR
1.52	88	62	NR	NR	NR
1.62	83	58	NR	NR	NR
1.72	78	55	NR	NR	NR
1.75	77	54	54	80	131

Minimum Required Thickness (mil) for Restrained Beam Rating (min)

W/D	HP/A	60	90	120	150
0.52	258	95	NR	NR	NR
0.62	216	92	NR	NR	NR
0.72	186	88	NR	NR	NR
0.82	163	85	NR	NR	NR
0.92	146	82	NR	NR	NR
1.02	131	78	NR	NR	NR
1.12	120	75	NR	NR	NR
1.22	110	72	NR	NR	NR
1.32	102	68	NR	NR	NR
1.42	94	65	NR	NR	NR
1.52	88	62	NR	NR	NR
1.62	83	58	NR	NR	NR
1.72	78	55	NR	NR	NR
1.75	77	54	54	54	91

NR - No Rating

INTERNATIONAL COATINGS GROUP INC — Type FBL-200. Investigated for Conditioned Interior Space Purpose and Interior General Purpose Use.

8. **Topcoat** — (Not Shown) — Sherwin Williams type DTM acrylic top coat applied at a minimum thickness of 6 mil over the intumescent material.

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