



BXUV.X791

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

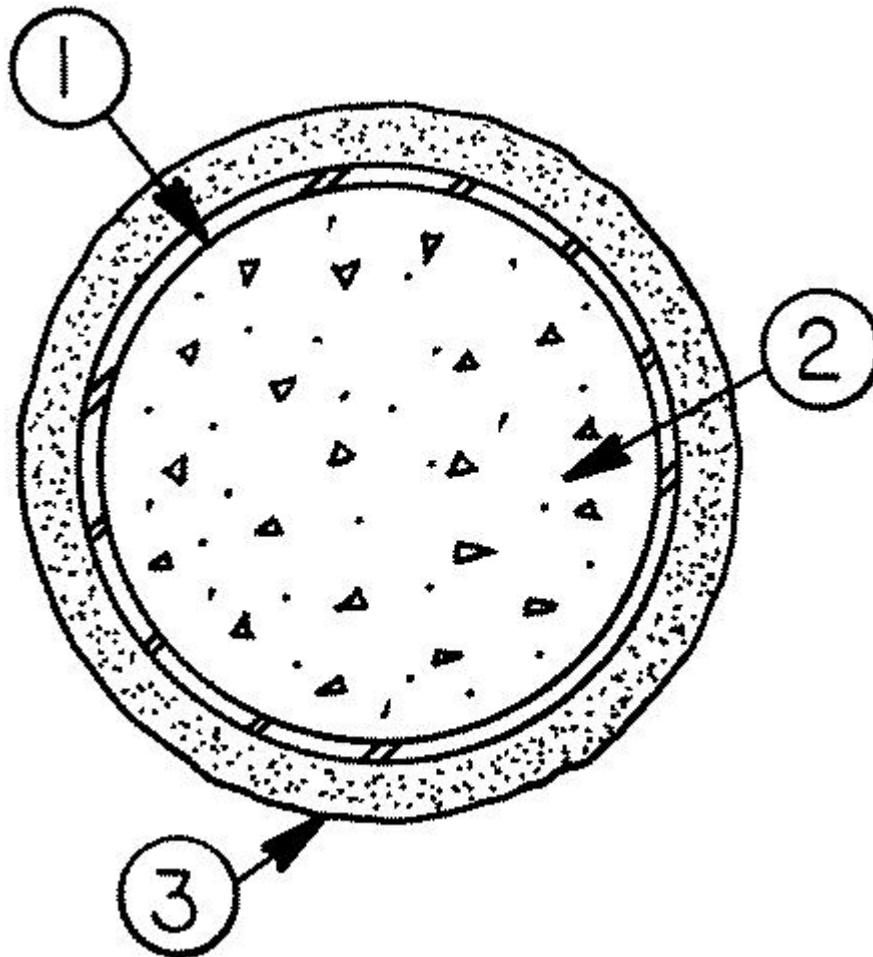
See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. X791

February 13, 2013

Ratings — 1, 1-1/2, 2, 3 and 4 Hrs.

*** 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 Pipe** — Steel circular pipe with a min diam (ID) of 12 in. and min wall thickness of 3/16 in. Steel pipe will be vented to provide 0.145 sq in. of vent per cu ft of concrete or a minimum of one pair of 1/2 in. diameter holes. Each pair spaced a maximum of 8 ft OC whichever is greater.

2. **Normal Weight Concrete** — Siliceous or carbonate aggregate, min density of 150 pcf, min 3000 psi compressive strength, vibrated.

3. **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and ind densities are 15/14, respectively. For method of density determination, see Design Information Section.

Rating Hr	Min Thkns In.
1	3/8
1-1/2	7/16
2	9/16
3	13/16
4	1-1/8

ARABIAN Vermiculite Industries — Types MK-6/HY, MK-6s, MK-10 HB.

GCP Korea Inc — Types MK-6/HY, MK-6s, MK-10 HB.

GCP Applied Technologies Inc — Types MK-6/HY, MK-6s, RG, MK-10 HB.

3A. **Spray-Applied Fire Resistive Materials*** — As an alternative to Item 3, applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and ind densities are 22/19, respectively. For method of density determination, See Design Information Section.

Rating Hr	Min Thkns In.
1	7/16
1-1/2	1/2
2	5/8
3	7/8
4	1-1/8

ARABIAN VERMICULITE INDUSTRIES — Types Z-106, Z-106/G, Z-106/HY.

GCP KOREA INC — Types Z-106, Z-106/G, Z-106/HY.

GCP APPLIED TECHNOLOGIES INC — Types Z-106, Z-106/G, Z-106/HY.

3B. **Spray-Applied Fire Resistive Materials*** — As an alternative to Items 3 and 3A, applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and ind densities are 40/36, respectively. Min avg and min ind density of 40/36 pcf respectively for Types Z-146, Z-146PC and Z-146T cementitious mixture. Min avg and min ind density of 50/45 pcf respectively for Types Z-156, Z-156T and Z-156PC. For method of density determination, See Design Information Section.

Rating Hr	Min Thkns In.
1	5/16
1-1/2	7/16
2	5/8
3	15/16
4	1-5/16

ARABIAN VERMICULITE INDUSTRIES — Type Z-146 investigated for exterior use.

GCP KOREA INC — Type Z-146 investigated for exterior use.

GCP APPLIED TECHNOLOGIES INC — Types Z-146, Z-146T, Z146PC, Z-156, Z-156T and Z-156PC investigated for exterior use.

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Last Updated on 2013-02-13

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.

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