

ULC

Fire Resistance Ratings for Concrete Masonry Units (Design # U914)

Technical Bulletin Overview

For structures using Concrete masonry units (CMU or Block) that require a fire rating to the International Building Code (IBC) or National Building Code of Canada (NBC) please refer to the following designs for masonry made with Elemix Additive used in wall construction.

ULC Design # U914
[ULC website link click here](#)

Chart 1

Summary of Ratings	
Wall Assembly	
Concrete Block EM-2.0	2hr

Test Protocols

Test for full scale fire resistance ratings were conducted at the ULC- Toronto facility under the supervision of ULC engineers.

Test protocols for the UL rating followed ASTM E119 and ANSI/UL 263 – Standard Test Method for Fire test of Building Construction and Materials.

Test protocols for the ULC rating followed ASTM E119 and CAN/ULC-S101 – Fire Endurance Test of Building Construction and Materials.

THE FOLLOWING PAGES HAVE BEEN REPRODUCED FROM THE UL WEBSITE EVERY EFFORT HAS BEEN MADE TO ENSURE THEIR COMPLETENESS HOWEVER PLEASE REFER TO www.ULC.ca FOR UP TO DATE INFORMATION

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BXUVC.U914 Fire Resistance Ratings

Design/System/Construction/Assembly Usage Disclaimer

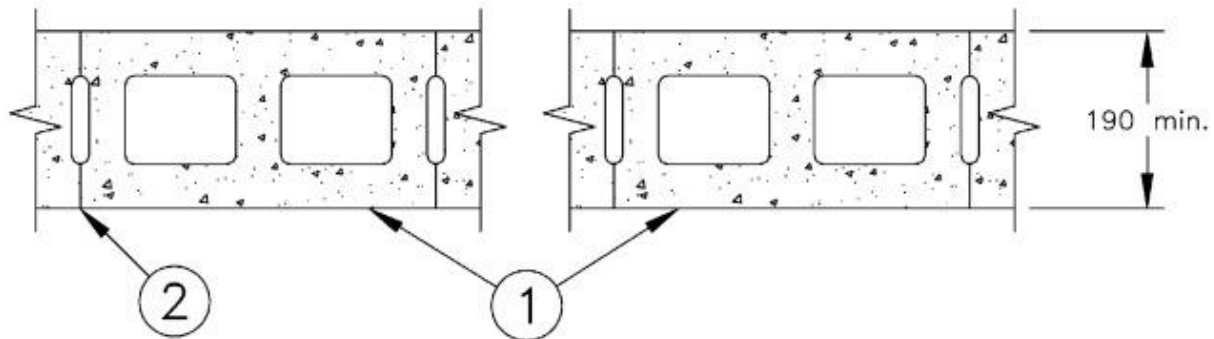
- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance 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 as Classified, Listed, or Recognized.

Fire Resistance Ratings

[See General Information for Fire Resistance Ratings](#)

Design No. U914 :: May 12, 2009

Assembly Rating – 2h :: Horizontal Section, bearing or non-bearing wall



1. **Concrete Blocks** — CAZTC (Guide No. 40 U18.4). Nominal 190 mm by 190 mm by 390 mm concrete blocks, 20 MPa compressive strength. 2 h rating based on noncombustible members framed into wall.

NOVA CHEMICALS INC — EM-2.0 Blocks

2. **Mortar** — Blocks laid in full bed of Type S Quickcrete mortar, 10 mm thick. Vertical joints staggered.

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Elemix® Concrete Additive

Elemix concrete additive utilizes advanced patented polymer technology to consistently deliver lightweight durable concrete at structural strengths. Available globally, Elemix additive provides concrete designers and manufacturers with an edge over the competition. Elemix additive is suitable for any application where lightweight and durability characteristics are important including; ready mix concrete, elevated decks, toppings, grouts and fills and manufactured concrete products, including block and precast building components.

The use of Elemix additive in concrete is covered by one or more of the following U.S. Patent Nos. 7,644,548; 7,648,574; 7,632,348; 7,658,797; 7,666,258.

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