

BASF
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WALLTITE[®]
MD

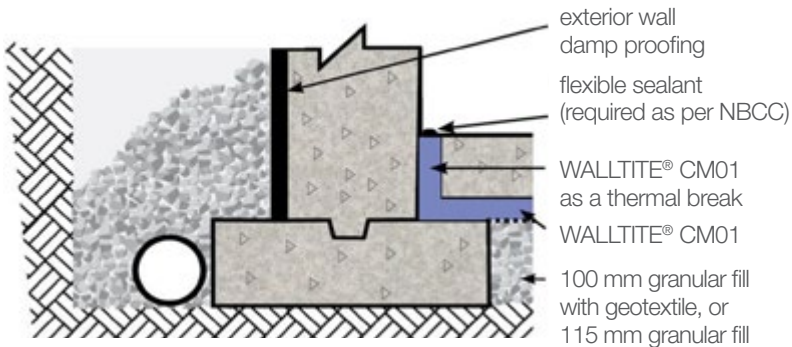
Protecting Homes: Radon Control with WALLTITE[®] CM01

CCMC 14152-R



A Preventative Solution

TYPICAL BASEMENT FLOOR TO FOUNDATION WALL JUNCTION COMPLYING WITH BUILDING CODE SEALING REQUIREMENTS



WALLTITE® CM01 sprayed directly on gravel for under slab

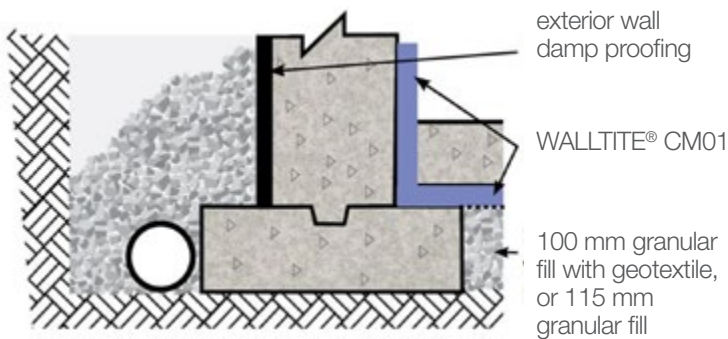
WALLTITE® CM01, when used as a soil gas (radon) barrier has been evaluated by CCMC to comply with: Sentence 9.13.4.2.(1), Protection from Soil Gas Ingress (air barrier system for floor assemblies) and as an alternative solution to:

Sentence 9.25.3.6.(1), Air Barrier Systems in Floors-on- ground (6-mil polyethylene)

Sealing the joint between the foundation wall and slab with a flexible sealant provides additional control of air leakage to satisfy the requirements of Sentence 9.25.3.6(5).

For more information refer to CCMC 14152-R

ALTERNATIVE BASEMENT FLOOR TO FOUNDATION WALL JUNCTION



WALLTITE® CM01 applied on basement walls and under slab

Understanding Radon

WHAT IS RADON?

Radon is one of many different types of soil gases. This gas is naturally formed by the breakdown of uranium in soil, rock and water that is then slowly released into the environment. Radon gas further breaks down to form radioactive particles that can be inhaled into the lungs. Since radon gas is colourless, odourless and tasteless it requires special equipment to be detected.

WHERE IS RADON?

Radon exists in almost every house. No areas of the country are considered “radon free”. Radon is typically in higher amounts in areas where high concentrations of uranium exist in underlying rock and soil. Concentrations vary significantly throughout Canada, with levels differing even between neighbouring houses.

HOW DOES RADON ENTER THE HOUSE?

Radon enters through openings where the house is in contact with the soil. A house can act like a vacuum for underground gases. As a gas, radon seeps through cracks and gaps (e.g. around pipes and windows) in the foundation. Stack effect can draw radon into buildings. When air escapes from a house, it is replaced with outside air.

The replacement air can come from the ground surrounding the house and bring soil gases with it, such as radon.

Air leakage control minimizes the risk of radon /soil gas entry.

WHEN IS RADON A CONCERN?

Generally, when radon is released from the ground it is diluted by fresh air; creating concentrations too low to be of concern. However, there is concern when radon enters enclosed spaces, like a house or basement, and reaches concentrations high enough to pose a health risk.

WHY IS RADON A CONCERN?

When radon gas is inhaled it can lead to possible tissue damage within the respiratory tract and increase the risk of cancer. A Health Canada study estimates 16% of lung cancer deaths in Canada can be attributed to radon exposure.

WALLTITE® CM01 applied to basement walls can help control entry of radon/soil gases.

Information on Protection from Radon Ingress can be found in the following Health Canada Publications:

Radon: A Guide for Canadian Homeowners (CMHC/HC)
Appendix A9.13.4 of the 2015 National Building Code of Canada

Additional Sources Referenced:

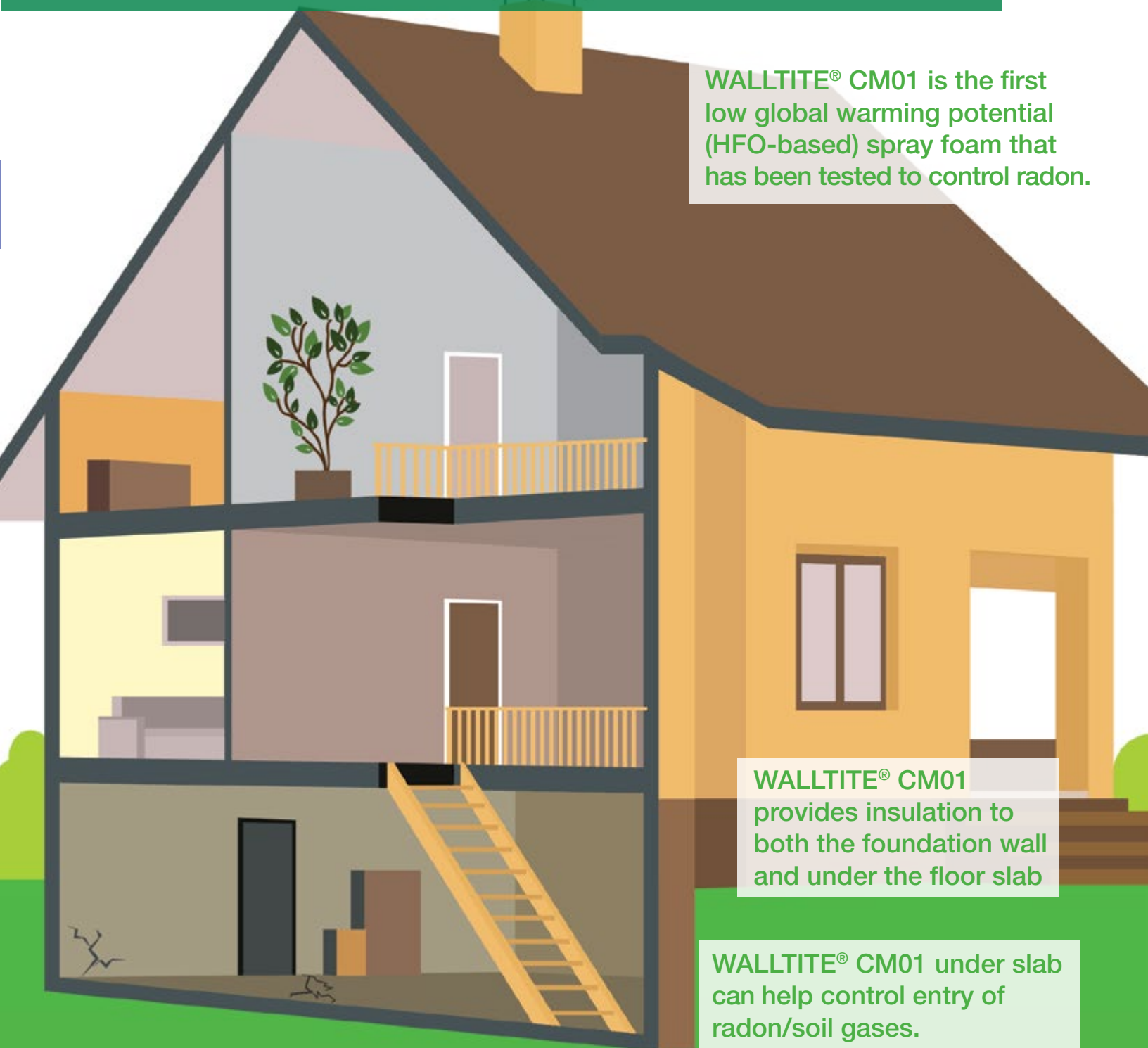
Health Canada, Radon - Environmental and Workplace Health, <http://www.hc-sc.gc.ca/ewh-semt/radiation/radon/index-eng.php>
National Building Code of Canada, 2010
National Building Code of Canada, 2015
Ontario Building Code, 2012, SB-9 “A Homeowner’s Guide to Radon,” The Canadian Real Estate Association, June 2016
Radon - Soil Gas Infiltration Control: A Comprehensive Review of Radon Resistant Construction, Mitigation Requirements and Options in Ontario (B. Decker, B. Wood; 14th Canadian Conference on Building Science and Technology)

WALLTITE® CM01 is the first hydrofluoroolefin (HFO) based spray foam that has been recognized as a radon barrier.

WALLTITE® CM01 is the first low global warming potential (HFO-based) spray foam that has been tested to control radon.

WALLTITE® CM01 provides insulation to both the foundation wall and under the floor slab

WALLTITE® CM01 under slab can help control entry of radon/soil gases.



ADDRESSING RADON GAS

Health Canada revised their guidelines for radon. Recommendation included:

- Remedial measures should be undertaken in a dwelling whenever the average annual radon concentration exceeds 200 Bq/m³ in the normal occupancy area.
- The higher the radon concentration, the sooner the remedial measures should be undertaken.
- When remedial action is taken, the radon level should be reduced to a value as low as possible.
- Construction of new dwellings should employ techniques that will minimize radon entry and facilitate post-construction radon removal, should this subsequently prove necessary.

WALLTITE® CM01, as part of an air barrier system, can reduce the risk of radon/soil gas entry.

RADON GAS AND THE NATIONAL BUILDING CODE OF CANADA

The 2010 and 2015 National Building Code of Canada requires a rough-in for a subfloor depressurization system unless the space between the air barrier system and the ground is designed to be accessible for the future installation of a subfloor depressurization system.

UNDERSTANDING THE CODES

There are variations in the requirements established by each province, municipality or authority having jurisdiction (AHJ) regarding the mitigation and control of soil gases including radon.

For example, where soil gas control is required, the 2012 Ontario Building Code requires for floors in contact with the ground, that a soil gas barrier be installed in accordance with Supplementary Standard SB-9, "Requirements for Soil Gas Control" or if the building has a single dwelling unit only, a subfloor depressurization system be installed according to Supplementary Standard SB-9, "Requirements for Soil Gas Control".

Certain municipalities may have specific Radon/Soil Gas Mitigation Programs that specify what measures are to be used. It is important for you to know and comply with the regulations required in your area.

For more information on WALLTITE:

www.walltite.com

1-866-474-3538



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