

Technical Bulletin

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Technical Bulletin No. SC54

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Subject: Designing Exterior Wall Assemblies for a Limiting Distance of Less than 0.6 m. (25-5/8 in) and Between 0.6m. (25-5/8 in) and 1.2 m. (3ft 11 in) from The Property Line Under NBC-2010

The 2010 edition of the *National Building Code of Canada* has introduced modifications to the requirements for the Construction of Exposing Building Face for Part 9 Houses (article 9.10.15.5).

Article 9.10.15.5.2) in NBC 2010, requires that exterior loadbearing (LB) and non-loadbearing (NLB) wall assemblies of Part 9 houses, where the limiting distance is less than 0.6 m. (25-5/8 in) from the property line, have a fire resistance rating (FRR) of at least 45 minutes and be clad with metal or non-combustible cladding installed without furring members over 12.7 mm (½ in) gypsum sheathing or masonry.

Article 9.10.15.5.3) in NBC 2010, requires that exterior loadbearing (LB) and non-loadbearing (NLB) wall assemblies of Part 9 houses, where the limiting distance is equal to or greater than 0.6 m. (25-5/8 in) and less than 1.2 m. (3 ft 11 in) from the property line, have a fire resistance rating (FRR) of at least 45 minutes and be clad with metal or non-combustible cladding with or without furring over 12.7 mm (½ in) gypsum sheathing or vinyl siding with or without furring members over 12.7 mm (½ in) gypsum sheathing.

Designers and building officials can use the Component Additive Method in the Appendix D of the NBC 2010 (article D-2.3.) to qualify the use of Owens Corning insulations to meet the **45 minute Fire Resistance** requirement in both cases.

Exterior load bearing (LB) and non-load bearing (NLB) wood stud assemblies using 2x4 or 2x6 studs spaced 400 mm (16") or 600 mm (24") and cavities filled with appropriate Owens Corning Ecotouch™ PINK™ FIBERGLAS® insulations achieve the required **45 minute FRR** as follows:

Wall Assembly Component (Load Bearing)	NBC 2010 Appendix D Reference	Time (minutes)	Total FRR Assembly from the Interior
Wood studs @ 400 mm (16") o.c	Table D-2.3.4.C	20	
12.7 mm (½ in) Type X gypsum wallboard	Table D-2.3.4.A	25	
Owens Corning Ecotouch™ PINK™ FIBERGLAS® insulation in cavity (minimum R-14) with sheathing and exterior cladding ⁽³⁾⁽⁴⁾	D-2.3.5.2 ⁽²⁾	-	
Total FRR Assembly from Interior Side			45 minutes⁽¹⁾

Note: Technical Solutions recommendations are for the information of the project designer. The project designer, engineer or architect is responsible for the suitability and performance of a design. If there are any inquiries regarding this bulletin, please telephone the Technical Solutions Manager directly.

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Wall Assembly Component (Load Bearing)	NBC 2010 Appendix D Reference	Time (minutes)	Total FRR Assembly from the Interior
Wood studs @ 400 mm (16") o.c	Table D-2.3.4.C	20	
15.9 mm (5/8 in) Type X gypsum wallboard	Table D-2.3.4.A	40	
Owens Corning Ecotouch™ PINK™ FIBERGLAS® insulation in cavity (minimum R-14) with sheathing and exterior cladding ⁽³⁾⁽⁴⁾	D-2.3.5.2 ⁽²⁾	-	
Total FRR Assembly from Interior Side			60 minutes⁽¹⁾

Wall Assembly Component (Load Bearing)	NBC 2010 Appendix D Reference	Time (minutes)	Total FRR Assembly from the Interior
Wood studs @ 600 mm (24") o.c	Table D-2.3.4.C	15	
15.9 mm (5/8 in) Type X gypsum wallboard	Table D-2.3.4.A	40	
Owens Corning Ecotouch™ PINK™ FIBERGLAS® insulation in cavity (minimum R-14) with sheathing and exterior cladding ⁽³⁾⁽⁴⁾	D-2.3.5.2 ⁽²⁾	-	
Total FRR Assembly from Interior Side			55 minutes⁽¹⁾

(1): Add 5 minutes to the total fire resistance rating if the wall assembly is non-load bearing and the cavity between the studs is filled with glass fiber insulation meeting CAN/ULC S702 with a mass of not less than 0.6 kg/m². Owens Corning R-12/14/20/22/24 and greater Ecotouch™ PINK™ FIBERGLAS® insulations meet this requirement. (see Table D-2.3.4.D, NBC 2010)

(2) Article D-2.3.5.2) in NBC 2010 states: "When an exterior wall assembly is required to be rated from the interior side only, such wall assemblies shall have an outer membrane consisting of sheathing and exterior cladding with spaces between the studs filled with insulation conforming to CAN/ULC-S702 and having a mass of not less than 1.22 kg/m² of wall surface." Owens Corning R-14/20/22/24 and greater, Ecotouch™ PINK™ FIBERGLAS® insulations meet this requirement.

(3) Owens Corning Foamular® CodeBord/Celfort exterior foam sheathing can be used when an exterior wall assembly is located less than 0.6 m.(25-5/8 in) from property line in conjunction with metal or non-combustible cladding installed without furring members over 12.7 mm (½ in) thick gypsum board . See NBC 2010 article 9.10.15.5.2)

(4) Owens Corning Foamular® CodeBord/Celfort exterior foam sheathing can be used when an exterior wall assembly is located equal to or greater than 0.6 m. (25-5/8 in) and less than 1.2 m.(3ft 11 in) from the property line in conjunction with metal or non-combustible cladding installed with or without furring members over 12.7 mm (½ in) thick gypsum board . Vinyl siding can be used as the exterior cladding installed with or without furring members over 12.7 mm (½ in) gypsum board. See NBC 2010 article 9.10.15.5.3).

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