

MASTERMAX EXTRA Breathable Membranes

1 DESCRIPTION

Mastermax Extra Breathable Membranes are flexible three layer polypropylene laminate composite materials for use as breather membranes in timber/steel-frame walls with a cavity and a masonry outer leaf, weatherboarding or tile/slate cladding.

KEY FEATURES:

- » Contribute to protecting a wall against water penetration (*see section 6*)
- » Remain breathable to permit unwanted moisture escaping
- » Contribute to reducing the risk of interstitial condensation (*see section 7*)
- » Adequate strength to resist damage during construction of the walls (*see section 8*)
- » Life equal to that of the building in which it is installed (*see section 10*)
- » Maintains a cost effective price point

CCMC Standards 2014 NHBC accepts the use of Mastermax Extra Breathable Membranes for use in timber/steel-framed construction, provided they are installed, used and maintained in accordance with NHBC Standards Chapter 6.2 External timber framed walls.

2 MANUFACTURE

2.1 The membranes are manufactured by a thermal-bonding process in which a polyethylene breathable film is bonded together with polypropylene non-woven membranes to form a flexible sheet.

3 DELIVERY AND SITE HANDLING

- 3.1** Rolls are delivered to site, individually wrapped in polythene foil identified with the phrase "CCMC 13599-R."
- 3.2** The rolls should be stored flat or on end on a clean, level surface and kept under cover.

4 USE

4.1 Mastermax Extra Breathable Membranes are satisfactory for use as on-site or factory-applied breather membranes in timber/steel-frame walls with a cavity and a masonry outer leaf, weatherboarding or tile/slate cladding.

5 EASE OF INSTALLATION

The products are designed to be installed by competent general builders or contractors experienced with these products.

6 WEATHERTIGHTNESS

6.1 The products will resist the passage of water, wind-blown rain and will protect the sheathing and frame from external moisture.

6.2 The products can be used as temporary weather protection during construction, prior to the completion of external brickwork or claddings. Must be protected from exposure to ultraviolet (UV) radiation from the sun within 60 days.

7 RISK OF CONDENSATION

The risk of condensation occurring within the wall of a timber-frame/steel frame building will depend upon the properties and vapour resistance of other materials used in the construction, the internal and external conditions, and the effectiveness of the internal vapour control layer.

8 STRENGTH

The products will resist the normal loads associated with construction and installation of timber-frame construction.

9 MAINTENANCE

As the products are embedded within the wall space and have suitable durability (*see section 10*) maintenance is not required. However, any damage occurring before enclosure must be repaired (*see section 13*).

10 DURABILITY

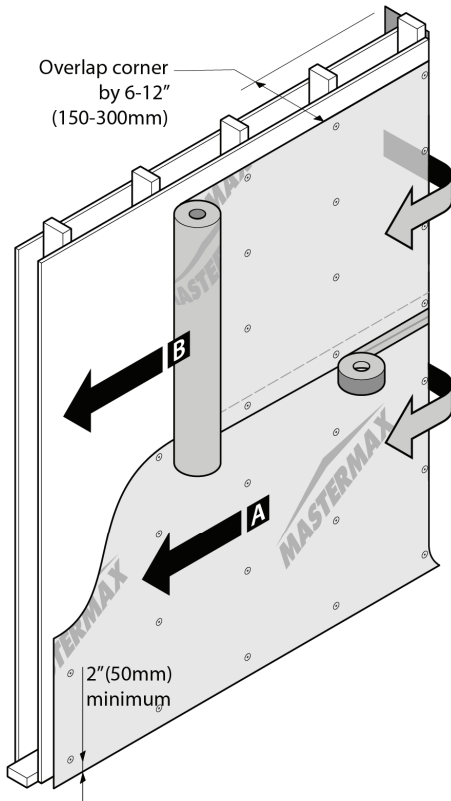
The products will be unaffected by the normal conditions found in timber/steel-frame walls and will have a life equal to that of the building in which they are installed.

11 REUSE AND RECYCLABILITY

The products contain polypropylene which can be recycled.

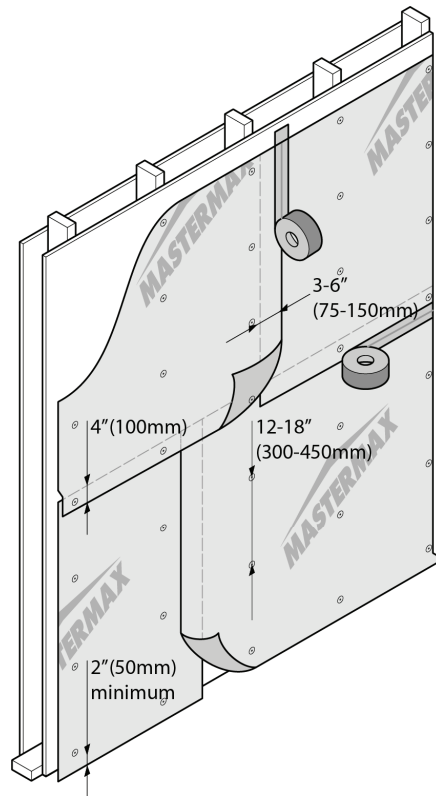
12 INSTALLATION

APPLICATION



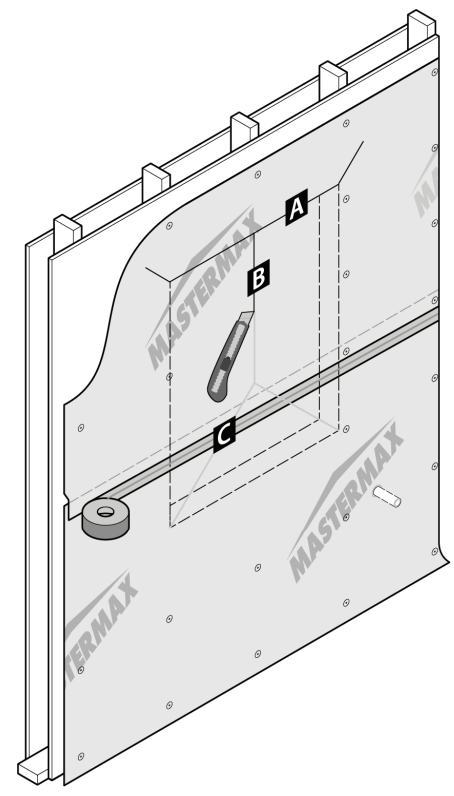
Apply Mastermax Extra housewrap starting at a corner leaving a 6"-12" vertical overlap. Unroll the housewrap at the bottom of the wall. Roll the product out horizontally as far as possible. Bottom edge of the roll should overlap the sill plate by 2" minimum.

LAPS AND SEAMS



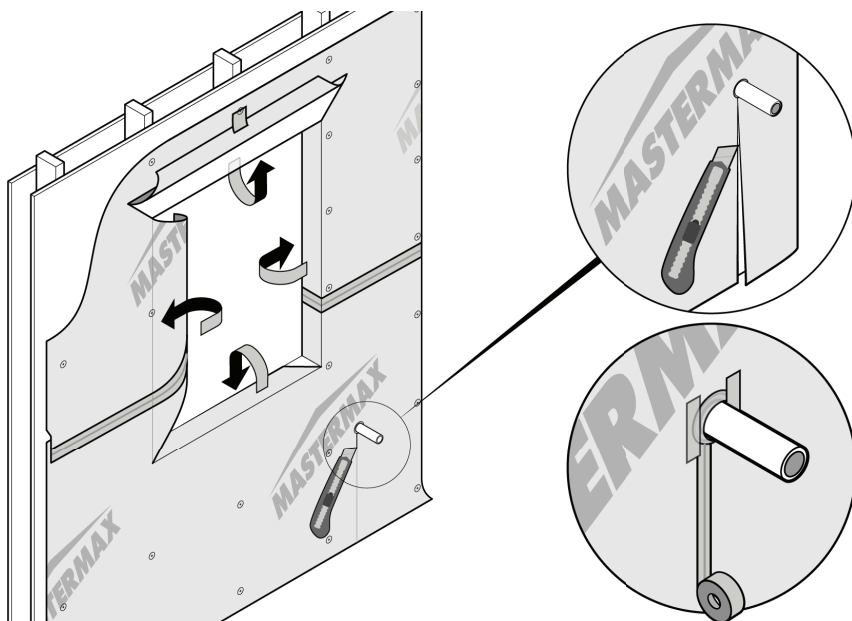
Use specific stapling nails or nails designed to hold down house wrap material spaced 12 to 18" on-center. Install with the material overlapping 3-6" at vertical joints, and 4" at horizontal joints. Vertical laps should be staggered wherever possible.

OPENINGS AND PENETRATIONS



Unroll Mastermax Extra housewrap over openings and penetrations. Cut the product for wall openings and penetrations.

SEALING OPENINGS AND PENETRATIONS



Tape seams, penetrations and at the joints around both window and door openings.

13 REPAIR

The products can be damaged by careless handling, high winds. Damage to the membrane must be repaired prior to the installation of external walls or cladding by laying another sheet over the damaged area, by patching and sealing correctly, ensuring water is shed away from the sheathing.

14 MATERIAL PROPERTIES

Mastermax Extra meets or exceeds all ASTM Standards as outlined below by an independent testing agency. Canadian testing was carried out in accordance with the following test methods.

Test Description	Test Method
Average Breaking Strength	ASTM D226 referencing ASTM D146, Section 13 referencing ASTM D828 with modification
Pliability at 25 degrees C / 90 degree bend	ASTM D226
Loss on heating at 105 degrees C	ASTM D226 referencing ASTM D146, Section 15
Unroll test	Custom test
Tear Strength	ASTM D4860 referencing ASTM D1922
Liquid Water Transmission Test	ASTM D4869, Section 8.3
Dimensional Stability	ASTM D4869 utilizing ASTM F1087

Test Description	Requirement	Results	Comments
Breaking Strength, KN/m	5.3 MD	5.3	Pass
	2.6 XD	2.9	Pass
Tearing Strength, N	4 MD	17 MD	Pass
	4 XD	38 XD	Pass
Pliability at 25°C / 90° bend	No cracks when bent against 12.7 mm radius mandrel	No cracks	Pass
Loss on heating at 105°C	<4%	0.09%	Pass
Unroll test	Observe for visual defects	No visual defects	Pass
Liquid Water Transmission Test	No sign of liquid water transmission	None	Pass
Dimensional Stability	<1.75% for type 3 and 4	0.02%	Pass
Water vapour permeance (ng/Pa·s·m ²)	≥170	2943	Pass

*Reference tests on April 21, 2014.