

ICC-ES Evaluation Report

ESR-2896

Issued December 1, 2011

This report is subject to renewal in one year.
www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION**
Section: 07 11 00—Dampproofing
Section: 07 13 00—Sheet Waterproofing
REPORT HOLDER:

DMX® PLASTICS LIMITED
 200 HYMUS ROAD
 TORONTO, ONTARIO, M1L 2E1
 CANADA
 (416) 751-5851
www.DMXplastics.com

EVALUATION SUBJECT:
**DMX® AG™ DAMPPROOFING AND WALL
WATERPROOFING MEMBRANE SYSTEM**
1.0 EVALUATION SCOPE
Compliance with the following codes:

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Foundation dampproofing
- Wall waterproofing (IRC only)

2.0 USES

The DMX® AG™ membrane system is a below-grade, exterior-wall, sheet membrane system that performs as a foundation wall dampproofing material on cast-in-place concrete, concrete masonry, insulated concrete form (ICF) and treated wood foundations. In those jurisdictions adopting the IRC, the membrane may be considered as a foundation wall waterproofing material for use in applications of low hydrostatic pressure (i.e., locations with perched water tables).

3.0 DESCRIPTION

DMX® AG™ membrane is a high-density polyethylene (HDPE), semirigid, thermally formed sheet membrane, “dimpled” on one side to provide an air gap between the membrane and the wall surface. The membrane system includes rolls of membrane material, and DMX® Washers™, DMX® QUIK-Plugs, and DMX® FlexTrim™ to fasten the DMX® AG™ to the foundation wall. DMX® AG™ membrane has a thickness of 0.024 inch (0.6 mm) and a unit weight minimum of 2.86 oz/ft² (873 g/m²). The dimple height is 0.31 inch (7.87 mm). The membrane is available in rolls 65 feet (20 m) in length and up to 8 feet (2.44 m) in width.

This membrane functions to reduce moisture in basements as follows:

- The membrane prevents ground moisture (rainwater) from coming into direct contact with the wall surface.
- The air gap allows moisture to condense against the membrane, flow down to the footing and drain away from the building.
- The membrane stretches and flexes to remain intact despite foundation wall shifting or cracking.

4.0 INSTALLATION

Installation of the DMX® AG™ membrane system must be in accordance with this report and the manufacturer’s published installation instructions, which are available at www.dmxplastics.com. The manufacturer’s published installation instructions must be available at the jobsite at all times during installation.

DMX® AG™ membrane must be installed with the “dimple” protrusion side against the foundation wall (see Figures 1 and 2), forming a continuous air gap around the basement wall. Except for concrete block foundation walls, which are required to be parged, primer material or other special treatment of the wall surface is not required prior to application of the membrane. Chalk lines must be made on the foundation wall at grade to establish placement of the upper edge of the membrane and the sealant bead. The membrane must be unrolled and applied to the foundation wall substrate with the flat tab at the top.

The membrane must be mechanically fastened with fasteners approved by DMX Plastics Limited. Screws must be used for ICFs and wood foundations, and nails must be used for concrete masonry block and cast-in-place concrete foundation walls. Fastening must be in accordance with the manufacturer’s published installation instructions. For ICF foundations, fastener spacing is determined by the spacing of the crossties of the ICF block system; fasteners must be installed into the flanges of the crossties. DMX® Washers™ must be installed along the top tab of the membrane. DMX® FlexTrim™ must be used with DMX® Washers™ at other locations where the membrane terminates, to prevent soil from entering the air gap. This trim must be fastened at a distance range of 6 to 8 inches (150 mm to 200 mm) on center. DMX® FlexTrim™ may be used along the top tab, but is not required except where the tab is trimmed for varying grade heights. The membrane must be weather-lapped a minimum of 6 inches (150 mm) and up to 12 inches (300 mm) horizontally, and a minimum of 6 inches (150 mm) and up to 12 inches (300 mm) vertically, and fastened in accordance with the manufacturer’s published installation instructions. The dimples must be intermeshed at over-laps.

A continuous, approximately $\frac{1}{2}$ -inch-thick (13 mm) bead of sealant must be applied between lapped edges of the membrane. DMX Plastics' approved sealant must be used, applied, and cured in accordance with DMX Plastics' published installation instructions. For ICF foundation walls, a compatible sealant approved by the ICF manufacturer must be used. The DMX[®] AG[™] membrane must be installed tightly around foundation wall penetrations and sealed in accordance with the manufacturer's published installation instructions.

5.0 CONDITIONS OF USE

The DMX[®] AG[™] membrane system described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report, the manufacturer's published installation instructions and the applicable code. In the event of a conflict between the installation instructions and this report, the more restrictive must govern.
- 5.2 The backfill of the foundation must be clean soil, free of damaging debris, placed so as not to damage the foundation or the membrane system. For jurisdictions adopting the IBC, the backfill must be placed in lifts and compacted; for jurisdictions adopting the IRC, backfilling requirements must be in accordance with the code or as determined by the code official. The design and construction of the foundation is outside the scope of this report.
- 5.3 DMX[®] AG[™] membrane materials must be stored out of direct sunlight and at temperatures above -24°F

(-31°C) but no higher than 122°F (50°C). DMX[®] AG[™] materials must not be installed when temperatures are below -24°F (-31°C).

- 5.4 The foundation wall protected with the membrane must be backfilled as soon as possible to protect the material from prolonged exposure to ultraviolet radiation.
- 5.5 DMX[®] AG[™] membrane must not be installed on foundation walls more than 16 feet (4.88 m) in height.
- 5.6 Use of the membrane under the IBC as waterproofing is outside the scope of this report.
- 5.7 The design and installation of the foundation drainage system is outside the scope of this report. The foundation drainage system must be installed in accordance with 2009 IBC Section 1805.4 (2006 IBC Section 1807.4) or IRC Section R405, as applicable.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Rigid Polyethylene, Below-grade, Dampproofing and Wall Waterproofing Material (AC114), dated February 2004 (editorially revised September 2011).

7.0 IDENTIFICATION

The DMX[®] AG[™] membrane and manufacturer-specified components described in this report must be identified on the packaging by a stamp bearing the manufacturer's name (DMX[®] Plastics Limited), the product name, and the evaluation report number (ESR-2896).

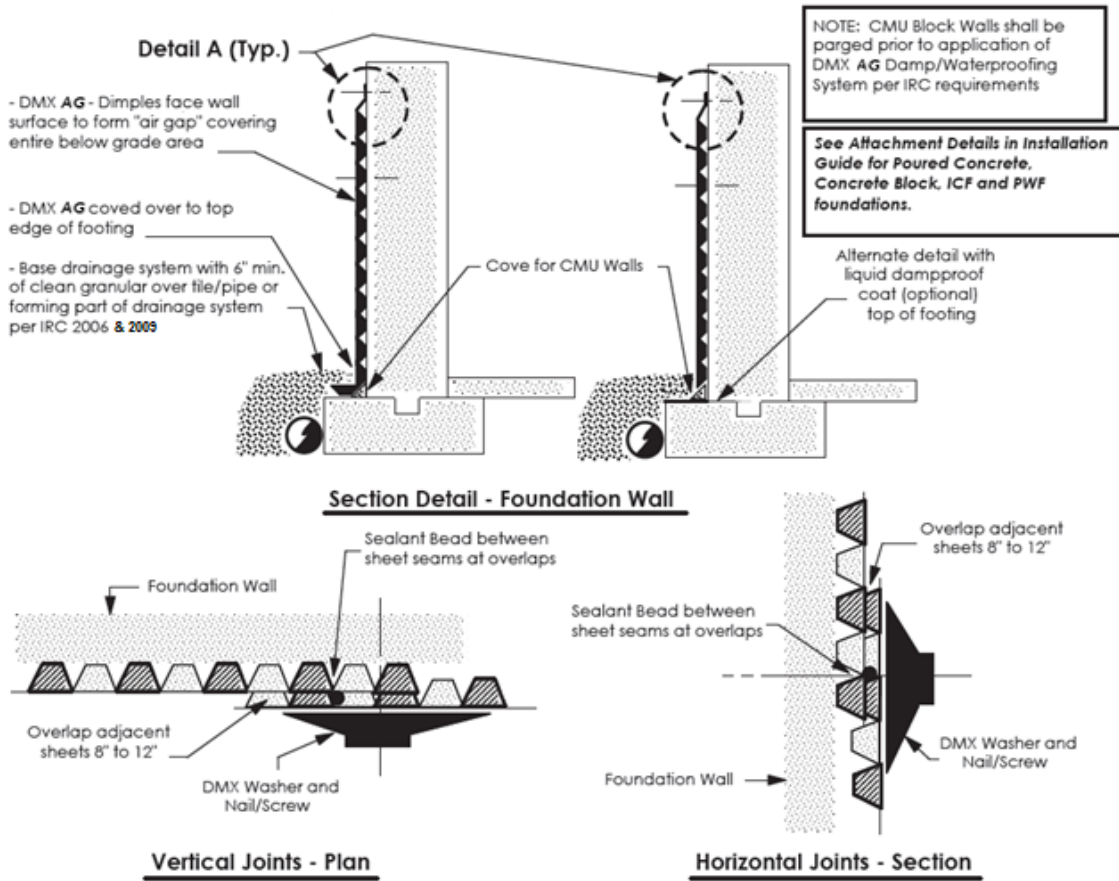


FIGURE 1—TYPICAL INSTALLATION DETAILS

For SI: 1 inch = 25.4 mm

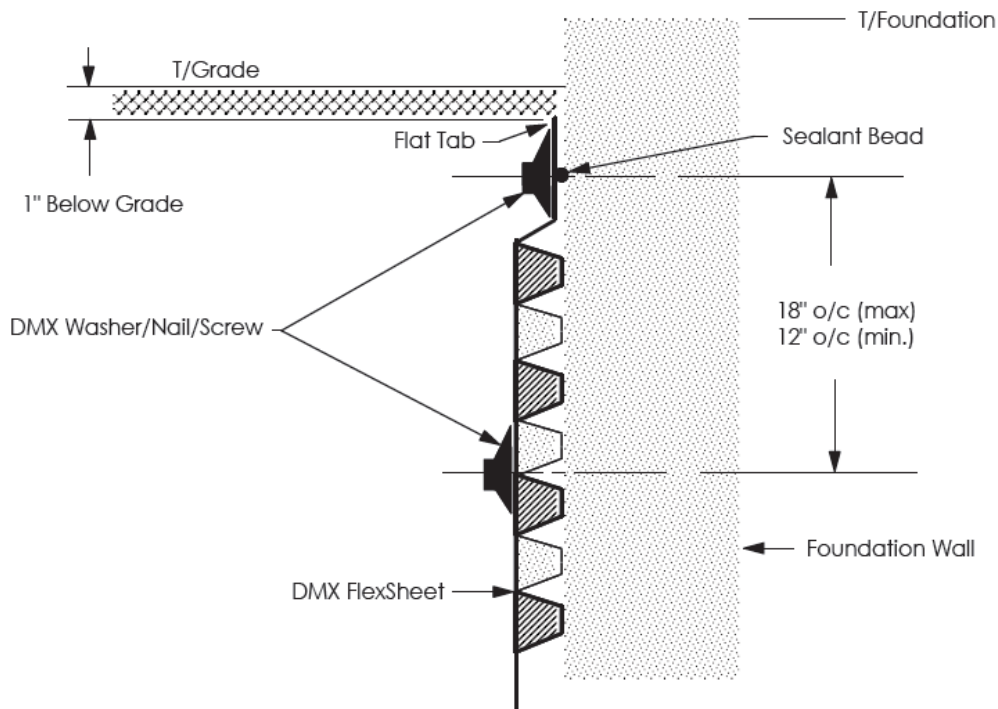


FIGURE 2—DETAIL AT TOP OF WALL

For SI: 1 inch = 25.4 mm