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ICC-ES Report

ESR-3813

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Reissued 06/2017
This report is subject to renewal 06/2018.

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 11 00—DAMPPROOFING
SECTION: 07 14 00—FLUID-APPLIED WATERPROOFING

REPORT HOLDER:

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EVALUATION SUBJECT:

HYDRO-TUFF



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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 11 00—Dampproofing

Section: 07 14 00—Fluid-Applied Waterproofing

REPORT HOLDER:

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EVALUATION SUBJECT:

HYDRO-TUFF

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015 and 2012 *International Building Code*® (IBC)
- 2015 and 2012 *International Residential Code*® (IRC)

Properties evaluated:

- Foundation waterproofing
- Foundation dampproofing
- Below grade floors

1.2 Evaluation to the following green standards:

- 2015, 2012 and 2008 ICC 700 *National Green Building Standard*™ (ICC 700-2015, ICC 700-2012 and ICC 700-2008)

Attributes verified:

- See Section 3.1

2.0 USES

Hydro-Tuff is a fully reinforced hot applied rubberized asphalt waterproofing and dampproofing membrane system applied to the exterior of below grade foundation walls of cast-in-place concrete, cement board or wood, and beneath below grade concrete floors. The membrane system is also an alternative to the waterproofing materials specified in IBC Section 1805.3 and IRC Section R406.2. The membrane system is an alternative to the dampproofing materials specified in IBC Section 1805.2 and IRC Section R406.1.

3.0 DESCRIPTION

Hydro-Tuff is a field applied reinforced membrane system comprised of Hydro-Tuff (HFA), HG Polyester Fabric and Hydro-Tuff PB-25. The membrane system can be applied over concrete, cement board and plywood substrates. The Hydro-Tuff system has a resistance to hydrostatic pressure of 50 psi (344.7 kPa) over a 1/8-inch-wide (3.18 mm) crack when applied in accordance with Section 4.0 and tested in accordance with ASTM D5385.

The attributes of the Hydro-Tuff is a field applied reinforced membrane system have been verified as conforming to the provisions of ICC 700-2015 and ICC 700-2012 Section 602.1.2 and ICC 700-2008 Section 602.11 for foundation waterproofing. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

3.1 Hydro-Tuff HFA:

Hydro-Tuff (HFA) is a hot applied rubberized asphalt fluid material applied in two layers to form a monolithic seamless membrane. Hydro-Tuff (HFA) is supplied in 30-pound boxes.

3.2 HG Polyester Fabric:

HG Polyester Fabric is a 1.35 oz/yd² (51 g/m²) non-woven, spunbonded polyester reinforcing fabric applied over the base layer of Hydro-Tuff (HFA). The reinforcement sheet is supplied in various lengths and widths.

3.3 Hydro-Tuff PB-25:

Hydro-Tuff PB-25 is a SBS modified, fiberglass reinforced, 94 mils thick [0.094 inch (2.4 mm)], medium to light duty protection sheet embed into the top layer of Hydro-Tuff (HFA) while it is still warm. The protection sheet is supplied in rolls measuring 39 inches (991 mm) wide and 49 feet (14.9 m) long.

4.0 INSTALLATION

Installation must comply with this report, the applicable code and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during construction. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

The ambient air temperature at the time of application must be above 0°F (15°C). The surface to which the membrane system is applied must be structurally sound, clean, dry, and free of dust, mud, loose mortar, sand, soil, frost or other loose materials. Additionally, there shall be no fins, metal projections or any substance that will prevent bonding of the membrane to the surface. Holes and recesses resulting from the removal of form ties shall be sealed with bituminous material or by other approved methods or materials.

Plywood substrates must be minimum 1/2-inch-thick exterior-grade plywood with tongue-and groove edges complying with the applicable code.

Concrete surfaces must be cured and dry. Hydro-Gard's Hydro-Primer Asphaltic Base must be used to condition the concrete surface in preparation for the application of the Hydro-Tuff (HFA) rubberized asphalt membrane system. The primer can be installed using a hand held sprayer and should be applied at an evenly applied rate of 300 to 600 ft²/gal (7.36 to 14.73 m²/L). Primer must not be allowed to pool or become contaminated with dirt or foreign substances. Primer must be completely dry prior to application of Hydro-Tuff (HFA) base coat.

Hydro-Tuff (HFA) membrane material, as described in Section 3.1, must be heated between 350°F and 400°F (176°C and 204°C) until it can be drawn free flowing. Hydro-Tuff (HFA) must be applied in two layers. The base layer must be applied at a thickness of 90 mils [0.09 inches (2.3 mm)]. While the base layer is hot and fluid, HG Polyester Fabric reinforcement fabric, as described in Section 3.2, must be embed into the base layer using a flat squeegee, brooms or other acceptable methods. HG Polyester Fabric must be overlapped vertically and horizontally a minimum of 2 inches (50 mm). The top layer of Hydro-Tuff (HFA) must be applied over HG Polyester Fabric at a thickness of 125 mils [0.125 inches (3.18 mm)] prior to the base layer cooling.

While the Hydro-Tuff membrane system is hot the 94 mil thick [0.094 inch (2.4 mm)] Hydro-Tuff PB-25 protection sheets, as described in Section 3.3, must be embed into the membrane. Vertical and horizontal seams must be overlapped a minimum of 3 inches (76.2 mm). Hydro-Tuff membrane system has an overall nominal thickness of 309 mils [0.309 inches (7.85 mm)]. Once the Hydro-Tuff membrane system has cooled, it is fully cured.

5.0 CONDITIONS OF USE

The Hydro-Tuff 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 shall comply with this report, the applicable code and the manufacturer's published

installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during construction. In the event of a conflict between the manufacturer's published installation instructions and this report, this report governs.

- 5.2** This report recognizes the use of Hydro-Tuff in applications on the exterior vertical surfaces of foundation walls of cast concrete, cement board or wood and beneath below grade concrete floors. Other uses of Hydro-Tuff are outside the scope of this report.
- 5.3** Joints and penetrations of the walls to which the membrane is applied must be made watertight in accordance with the applicable code.
- 5.4** Hydro-Tuff membrane system must be applied at an overall nominal thickness of 309 mils [0.309 inches (7.85 mm)].
- 5.5** When use is in dampproofing applications, a subsurface soil investigation of the level of groundwater at the construction site must be performed to verify the nonexistence of hydrostatic pressure.
- 5.6** When use is in waterproofing applications, below grade concrete floors must be designed to withstand hydrostatic pressure.
- 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 IBC Section 1805.4 or IRC Section R405, as applicable.
- 5.8** Hydro-Tuff membrane system must be installed by Hydro-Gard approved installation contractors.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Cold, Liquid-applied, Below-grade, Exterior Dampproofing and Waterproofing Materials (AC29), dated June 2011 (editorially revised October 2014).

7.0 IDENTIFICATION

The containers of the Hydro-Tuff membrane material as described in this report must be identified by a label bearing the manufacturer's name (Hydro-Gard, LLC) and address; the product name (Hydro-Tuff); and the evaluation report number (ESR-3813).