



# COUNTY OF PRINCE WILLIAM

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DEPARTMENT OF  
PUBLIC WORKS  
Division of  
Building Development

Robert W. Wilson  
Director

## Product Approval 00-01 April 15, 2004

<b><u>Division 07:</u></b>	<b>Thermal and Moisture Protection</b>	<b><u>Section 07100:</u></b>	<b>Fluid Applied Waterproofing</b>
<b><u>Product:</u></b>	<b>Tuff-N-Dri</b>	<b><u>Manufacturer:</u></b>	<b>Koch Waterproofing 6402 E. Main St Suite 201 Reynoldsburg, OH 43068</b>
<b><u>Report:</u></b>	<b>NER-480 (attached)</b>		

### Conditions

1. Tuff-N-Dri is approved in accordance with NES Ner-480 Evaluation Report. If the NES Evaluation Report does not remain current, this approval expires.
2. A copy of this approval and the NES Evaluation Report must be maintained with the approved construction drawings on-site for the inspectors review.
3. Tuff-N-Dri is not a replacement or substitution for foundation drain tile.
4. Tuff-N-Dri can only be applied when the ambient temperature is above 20 deg. F.
5. Applied Tuff-N-Dri shall not be exposed to direct sunlight for more than 15 days.
6. When the backfill material contains angular stone or sharp objects, protection boards shall be provided over Tuff-N-Dri.

Eric M. Mays, P.E., C.B.O.  
Building Official

Cc: Product Approval Folder  
Building Plan Review Branch  
Construction Inspections Branch



# National Evaluation Service, Inc.

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## NATIONAL EVALUATION REPORT

### Report No. NER-480

*Re-Issued June 1, 2002*

#### DIVISION 07 – THERMAL AND MOISTURE PROTECTION

#### Section 07140 – Fluid-Applied Waterproofing

#### MANUFACTURER:

**Koch Waterproofing Solutions**  
6402 East Main St., Suite 201  
Reynoldsburg, OH 43068  
[www.tuff-n-dri.com](http://www.tuff-n-dri.com)

#### EVALUATION SUBJECT:

**KOCH WATERPROOFING SOLUTIONS**  
**TUFF-N-DRI® EXTERIOR FOUNDATION**  
**WATERPROOFING MEMBRANE**

*This report is limited to the specific product and data and test reports submitted by the applicant in its application requesting this report. No independent tests were performed by the National Evaluation Service, Inc. (NES), and NES specifically does not make any warranty, either expressed or implied, as to any finding or other matter in this report or as to any product covered by this report. This disclaimer includes, but is not limited to, merchantability. This report is also subject to the limitation listed herein.*

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**NES**  
*Product Evaluation Listing*

#### 1.0 SUBJECT

#### 2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT

#### 3.0 DESCRIPTION

#### 4.0 INSTALLATION

#### 5.0 IDENTIFICATION

#### 6.0 EVIDENCE SUBMITTED

#### 7.0 CONDITIONS OF USE

*Re-Issued June 1, 2002*

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#### 1.0 SUBJECT

Koch Waterproofing Solutions Tuff-N-Dri® Exterior Foundation Waterproofing Membrane.

#### 2.0 PROPERTY FOR WHICH EVALUATION IS SOUGHT

Foundation Waterproofing Material.

#### 3.0 DESCRIPTION

**Koch Waterproofing Solutions Tuff-N-Dri** waterproofing membrane is a spray-applied foundation waterproofing material composed of polymer-modified asphalt in a water carrier that cures to a monolithic, elastomeric membrane.

Tuff-N-Dri is a spray-applied waterproofing that is installed to a thickness of 63 mils (40 mils dry) on the exterior of below-grade foundation walls. The material is available in 55-gallon drums, having a density of 8.1 pounds per gallon. Storage shall be above 50°F. Shelf life is a maximum of 12 months.

#### 4.0 INSTALLATION

Tuff-N-Dri is designed for use on exterior, below-grade, foundation walls. It is applied only by a Koch Waterproofing Solutions selected waterproofing contractor to ensure proper installation. The installation shall conform to the manufacturer's instructions, revised April 2000, and this report. A primer material is not required prior to application of the material, and immediate backfill pressure, after application, is not necessary.

Substrates shall be clean, smooth, firm, free of dust, mud, loose mortar, wires and any other substances that might prevent proper placement and bonding. Wall ties shall be removed and mortar joints shall be flush. Cracks, voids and holes shall be patched with a nonshrinking grout or asphalt mastic, with nonshrinking grout preferred for large defects.

Tuff-N-Dri shall only be applied when heated to between 140°F and 160°F and when the air temperature is at least 20°F. The time needed for the coating to cure before backfilling is 16 to 24 hours; lower air temperatures require a longer curing time. Application rate of the material is dependent upon the foundation wall surface; for cast in place or precast concrete and parged concrete masonry units, the rate shall be 25 sq. ft./gal. and for concrete masonry units, 20 sq. ft./gal. Tuff-N-Dri is permitted to be applied to concrete foundations as soon as the forms are removed and to concrete masonry unit foundations when the mortar has cured.

Concrete and masonry shall not be frozen. After application, Tuff-N-Dri is limited to no more than 15 days exposure to sunlight prior to backfilling.

#### 5.0 IDENTIFICATION

Each container shall bear the manufacturer's name, address, and product name and the NES evaluation report number.

#### 6.0 EVIDENCE SUBMITTED

**6.1** Koch Waterproofing Solutions Company Tuff-N-Dri® Waterproofing Membrane Detailed Application Instructions, revised April 2000.

**6.2** Report of tests on Tuff-N-Dri® by DL Laboratories, Report No. DL-8980-R, dated July 13, 1992:

- Film thickness
- Tensile strength and elongation
- Durability
- Water-vapor transmission

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Re-Issued June 1, 2002

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- Water solubility
- Adhesion in peel
- Hydrostatic pressure
- Low-temperature flexibility
- Crack bridging

**6.3** Data on DL Laboratories, dated December 30, 1992.

**6.4** Letters from Koch Materials Company, dated November 23, 1992 and January 18, 1993.

**6.5** Report of tests on Tuff-N-Dri® by DL Laboratories, Report No. D2-8980, dated January 14, 1993:

- Ability to remain in place
- Tensile and elongation
- Durability
- Flow resistance
- Water solubility
- Adhesion in peel
- Hydrostatic pressure
- Low temperature flexibility and crack bridging
- Weight loss
- Hardness

**7.0 CONDITIONS OF USE**

The National Evaluation Service Committee finds that Koch Waterproofing Solutions Tuff-N-Dri® Exterior Foundation Waterproofing Membrane is an alternative material to that specified in the *BOCA National Building Code/1999*, the *1999 Standard Building Code*, the *1997 Uniform Building Code*, the *2000 International Building Code* and the *2000 International Residential Code*, subject to the following conditions:

- 7.1** Application shall be by a Koch Waterproofing Solutions selected waterproofing contractor.
- 7.2** Installation shall conform to the manufacturer's instructions, revised April 2000 and this report. A copy of these instructions shall be on the jobsite at all times.
- 7.3** Air temperatures of at least 20°F are required during application.
- 7.4** When the backfill material contains angular stone or sharp objects, protection boards shall be provided over Tuff-N-Dri.
- 7.5** Prior to application over concrete walls, all holes and recesses resulting from the removal of form ties shall be sealed with a bituminous material or other approved method or material.
- 7.6** Following application, the material shall not be exposed to direct sunlight for more than 15 days.
- 7.7** Before application, all walls shall be prepared for waterproofing in accordance with the applicable code.
- 7.8** This report is subject to periodic re-examination. For information on the current status of this report, consult the [NES Product Evaluation Listing](#) or contact the [NES](#).