



3030 SCIOTO DARBY EXECUTIVE COURT / HILLIARD, OHIO 43026-8989

dri-lok.com

**DRI-LOK WATERPROOFING SYSTEM SPECIFICATIONS
SECTION 07 BELOW GRADE FOUNDATION WATERPROOFING**

GENERAL

1.0 SCOPE OF WORK

The work under this heading shall include all labor, materials, equipment and supervision required to install DRI-LOK Waterproofing protection as specified or where shown on the contract drawings.

2.0 RELATED WORK BY OTHERS

- 2.1 Proper preparation of areas to receive waterproofing including removal of any protruding /sharp materials, patching of concrete, and filling or leveling of uneven surfaces.
- 2.2 Removal of all water and debris from excavation where waterproofing is required. Supply placing and compacting of backfill.

3.0 QUALIFICATION OF MANUFACTURER

Materials, application methods and equipment shall be of manufacture and type by: DRI-LOK Systems, LTD. 3030 Scioto Darby Executive Court Hilliard, Ohio 43026-8989 and have 50+ years manufacturing and installation experience under the name: DRI-LOK Waterproofing System, LTD.

4.0 STORAGE OF MATERIALS

All DRI-LOK materials stored at the job site shall be kept dry, properly covered and protected, and shall be on a platform off the ground.

5.0 SPECIAL CONDITIONS

- 5.1 DRI-LOK Waterproofing shall not be applied in standing water, ice, snow, or during precipitation.
- 5.2 Do not apply where there are indications of alkaline, brine, or acids in the backfill material. Where there are alkaline, brines, or acids, they are to be of no more than a PH of 10 and no lower than a PH of 5 and a maximum brine content of 2 percent.
- 5.3 This waterproofing system, DRI-LOK Waterproofing System can be applied to foundation walls that are made of brick, stone, CMU masonry, concrete, green concrete walls, wood lagging (where plywood is installed), steel sheet piling, C.I.P. structural decks, under plaza decks, and on top of compacted subgrade for under floor waterproofing.
- 5.4 DRI-LOK waterproofing can be applied to vertical walls that are damp but not where running water is present. Manufacturer to approve the extent of the above condition prior to application.
- 5.5 DRI-LOK waterproofing can be applied to footers that are damp but have no standing water.
- 5.6 DRI-LOK Systems, LTD. shall coordinate with contractor for best application of waterproofing due to weather and timing of backfill.
- 5.7 DRI-LOK waterproofing can be applied in zero degrees Fahrenheit temperatures. Manufacturer to approve zero-degree conditions prior to application.
- 5.8 DRI-LOK Systems, LTD. will supply material sheets to architect or contractor when requested.

6.0 WORK CONDITIONS

- 6.1 The contractor shall provide proper access to the work area for equipment.
- 6.2 Sufficient storage space at work area for required work materials.

7.0 PRODUCTS

Exterior below grade waterproofing products shall be either pure Wyoming type Bentonite clay or Bentonite clay compound as specified herein.

8.0 MATERIALS

- 8.1 DRI-LOK Waterproofing is a spray applied mineral waterproofing consisting of Wyoming type Bentonite and an elasticized binder.
- 8.2 DRI-LOK Waterproofing requires no protection board, drainage boards or drainage mats applied over product.

9.0 CONDITION OF WORK SURFACES

- 9.1 Walls and footing shall be clean, dry and free of protrusions and obstructions. All debris and standing water shall be removed.
- 9.2 Damaged or honeycombed concrete shall be patched, and penetrations shall be grouted with a cement grout or link seals installed around penetration.
- 9.3 Horizontal below grade surfaces shall be dry, free of obstructions and prepared to receive waterproofing or as recommended by the manufacturer.
- 9.4 Damages to the waterproofing by other trades shall be the responsibility of such other trades. Repairs shall be made by the waterproofing contractor.

10.0 INSPECTION OF AREA

Prior to beginning work, representatives of the contractor, architect, and the waterproofing contractor shall examine the areas to be waterproofed. Areas not properly prepared shall be put in acceptable condition.

11.0 APPLICATION (Vertical Walls)

- 11.1 Apply DRI-LOK Waterproofing by spray methods in a nominal 1/4" thick (250 Mil) seamless membrane, filling all joints, honeycombed areas and openings around pipes to as great a depth as possible. Thickness to be selected by architect, general contractor or recommended by the manufacturer to best suit the conditions.
- 11.2 Place a double thickness membrane at the construction joints and surrounding all pipe penetrations extending outward at least two inches in all directions.
- 11.3 Extend the waterproofing to the edge of the footings or as indicated on the drawings.
- 11.4 Waterproofing shall be self-supporting against the wall and resistant to weather damage to allow the contractor adequate time for placement of backfill. All vertical and horizontal edges shall be tightly sealed against the wall to protect against rain and run off water. Backfill may be placed immediately, but no longer than 5 days after application.
- 11.5 Backfill shall be of granular nature, clean, free of debris, rock, lump clay, or foreign materials. Where sand is used, it shall be free of salts, acids or other like contaminants. (See special conditions).

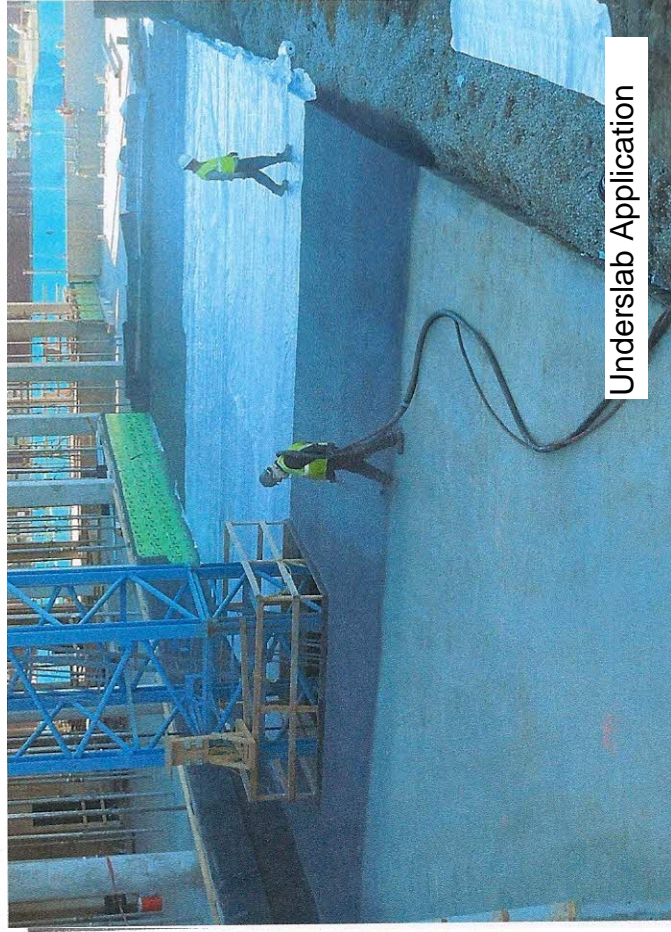
12.0 APPLICATION (Wood Lagging and Piling)

- 12.1 Surfaces of wood lagging to have plywood installed to the wood lagging to create an acceptable surface to install waterproofing.
- 12.2 Fill all joints to as great a depth as possible.
- 12.3 Apply DRI-LOK waterproofing in a nominal 3/8" (375 Mil) thick seamless membrane below 30'.
- 12.4 Extend the waterproofing inward at least 6" at the juncture of the grade and the lagging or piling.

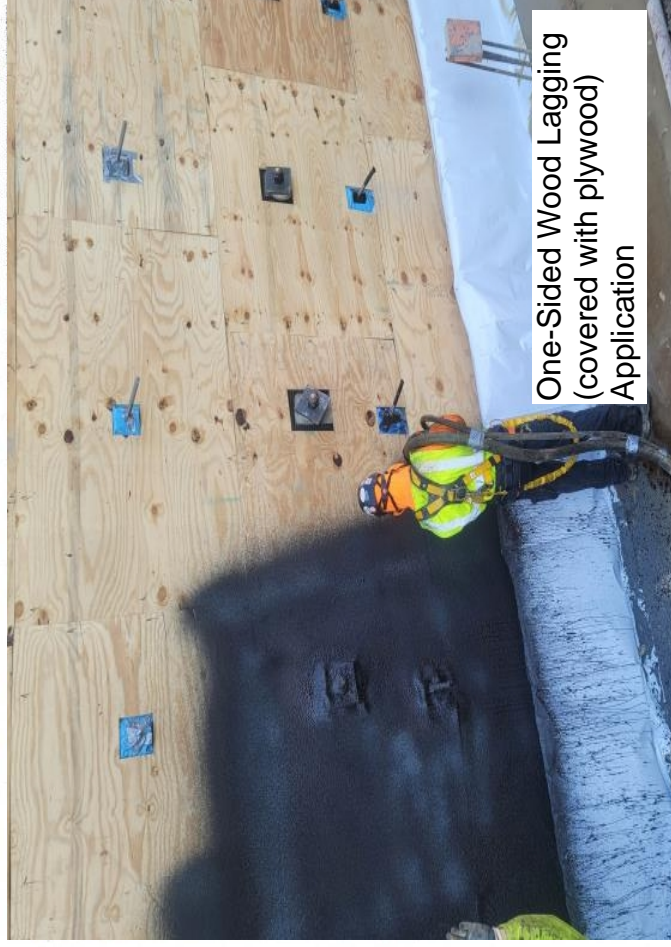
- 12.5 Reinforcing steel may be placed and concrete may be poured immediately, after white plastic has been installed over the DRI-LOK Waterproofing membrane. White Plastic to be applied on all vertical surfaces for blindside waterproofing.
- 13.0 APPLICATION (Under Slab, Between Slabs and Plaza Decks)**
- 13.1 Apply DRI-LOK membrane in nominal 1/4"(250 Mil) or 3/8"(350 Mil) thick seamless membrane by spray methods as recommended by the manufacturer.
- 13.2 Apply over prepared grade, compacted subgrade or concrete mud slabs. Where installed on horizontal surface with a 4 mil or 6 mil white polyurethane sheet.
- 13.3 Penetrations through the slab shall be carefully treated, extending the membrane upwards around penetrations through the slab at least 2 inches.
- 13.4 Place a double thickness coating at all joints formed at the juncture of the footing and extend upwards to grade on adjacent walls.
- 13.5 The concrete slab shall be placed as soon as sufficient waterproofed areas are available, but no longer than 5 days after application.

END OF SECTION

TECHNICAL DATA			JOBS COMPLETED SHORT LIST		
Permeability	D ASTM 5084 Mod	2.9x10	PROJECT	ARCHITECT	CM or CONTRACTOR
IndexFlux	D ASTM 5887 Mod	2.7E-10	AEP Parking Garage Columbus, Ohio	NBBJ Architects Columbus Ohio	Dugan & Meyers Const. Columbus Ohio
Hydraulic Conductivity	D ASTM 5887 Mod	1.9E-09	Kenyon College Rec Ctr. Gambler, Ohio	Gund Architects Cambridge, Mass	Albert M. Higley Co. Cleveland, Ohio
Bentonite Content nominal 1/4"(250 Mil) thickness 1lbs. to 1 ¼ lbs. per sq. ft.			Huntington Park Stadium Columbus Ohio.	360 Architecture Columbus, Ohio	Turner Const. Co. / Lithko Contracting Inc. Columbus. Ohio
Bentonite Content normal 3/8" (375 Mil) thickness 1 ½ lbs. to 2 lbs. per sq. ft.			J.M. Smucker Legacy Bldg. Orrville, Ohio	Domokur Architects Akron, Ohio	Imhoff Const. Services Orville, Ohio
Moisture Content		9	Nationwide Children's Hosp. Replacement Hospital Columbus, Ohio	FKP Architects Houston, Texas	Turner/Smoot Const. Lithko Contracting Inc. Columbus, Ohio
Swell Index	D ASTM 5890	28	St. Ann's Hosp. Expansion Westerville, Ohio	Karlsberger Arch. Columbus, Ohio	Danis Bldg. Const. Co Dayton, Ohio
Elasticized Binder	D ASTM 7496		Ronald McDonald House Columbus, Ohio	M+A Architects Dublin, Ohio	Continental Bldg. Co. Columbus, Ohio
Nominal 1/4"(250 Mil) thickness recommended for structures to a depth of 30 ft.			Torat Emet Synagogue Bexley, Ohio	RED Architects Columbus, Ohio	Corna / Kokosing Const. Westerville, Ohio
Nominal 3/8"(375 Mil) thickness required for structures 30 ft. and deeper.			IGS Energy Dublin, Ohio	Bird Houk Collaborative Gahanna, Ohio	Messer Const. Co. Columbus, Ohio
Spray applied seamless membrane.			Ohio State Univ. Ohio Union Replacement Bldg. Columbus, Ohio	Moody/Nolan LTD. Columbus, Ohio	Smoot Const. Co. Columbus, Ohio
Application rate: Approx. 1000 sq. ft. per hr.			Denison Univ. Cleveland Hall Granville, Ohio	Maddox NBD Columbus, Ohio	Lincoln Cons. Co. Columbus, Ohio
Warranty Period: 5 yrs. from date of substantial Completion. (Additional Warranty Coverage upon request)			Lower.com Field Columbus, Ohio	HNTB Corp Blue Ash, Ohio	Lithko Contracting Co. Columbus, Ohio
			Ohio Health Riverside Hospital Columbus, Ohio	NBBJ Columbus, Ohio	Lithko Contracting Columbus, Ohio
			NCH Bed Tower & Garage Columbus, Ohio	NBBJ Columbus, Ohio	Walsh Const. Company Chicago, IL
			OU Student Housing Athens, Ohio	AECOM Columbus, Ohio	Elford Construction Co. Columbus, Ohio



Underslab Application



One-Sided Wood Lagging
(covered with plywood)
Application



Stone/Brick Vertical
Wall Application



CIP Vertical Wall Application



CMU Masonry Perimeter
Dampproofing/Waterproofing
Application



Green Concrete Elevator Pit
Vertical Wall Application



CIP Vertical Wall Application



Under Mat Foundation
Waterproofing with Protective
Polyethylene sheet

SECTION 07 17 10

BENTONITE WATERPROOFING

PART 1-GENERAL

1.1 SUMMARY

- A. Section Includes: Spray applied mineral waterproofing for below grade application.
- B. Specified in Other Sections:
 - 1. Excavation.

1.2 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions.
- B. Submit waterproofing system warranty.

1.3 QUALITY ASSURANCE

- A. Installer: Performed only by the manufacturer or an experienced installer approved by the material manufacturer.

1.4 PRODUCT HANDLING

- A. Deliver materials in manufacturer's original, unopened and labeled containers.
- B. Store, handle and protect materials in accordance with manufacturer's recommendations.

1.5 PROJECT CONDITIONS

- A. Do not start waterproofing work until piping, conduit and other projections through the substrate have been installed and substrate patched and sealed.
- B. Protect adjacent materials and surfaces from overspray of materials.
- C. Proceed with waterproofing work only when existing and forecasted weather conditions permit work to be performed in accordance with manufacturer's recommendations.

1.6 WARRANTY

- A. Submit manufacturer's written five-year warranty agreeing to repair or replace work which leaks water, deteriorates excessively or otherwise fails to perform as required due to failure of materials or workmanship.

PART 2-PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Spray applied: DRI-LOK Systems, LTD., 3030 Scioto Darby Executive Ct., Hilliard, Ohio 43026, Phone 614-407-7152

2.2 MATERIALS

- A. Bentonite: Loose, dry high-swelling Wyoming-type granular bentonite (clay), also known as sodium bentonite, minimum 85% montmorillonite (hydrated aluminum silicate), 90% minimum passing 20-mesh sieve and 10% maximum passing 200-mesh sieve.
- B. Bentonite waterproofing: Spray applied mineral waterproofing consisting of Wyoming type bentonite clay and an elasticizer binder.
- C. Protection Course: Provide type recommended by product manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Proceed with waterproofing only after substrate work to receive bentonite application is complete, including penetrations (to the extent possible).
- B. Clean surfaces to be treated of oil, grease, dirt and loose material. Point and fill holes, joints and cracks flush with cement mortar or grout, grind down high spots and smooth rough surfaces.

3.2 INSTALLATION

- A. Spray apply one coat of bentonite waterproofing material, over scheduled walls below grade, covering all surfaces and filling all cracks with continuous coating free of breaks and pin holes. Extend coating from outside edge of footing to within 2 inches below finish grade and to top of foundations walls. Apply material at manufacturer's recommended rate of 1 1/4 lb. to 1 1/2 lb. per square foot to produce a nominal 1/4 inch (250 Mil) seamless membrane thickness.
- B. Apply a double thickness to waterproofing material at all pipe penetrations, construction joints, corners and footing wall to junction points.

3.3 SUBSEQUENT OPERATIONS

- A. Protect applied waterproofing from rain or ground water damage until backfill operations are completed.
- B. Install foundation wall backfill within seven days. Place backfill in a manner that will not damage waterproofing coating.
 - 1. Where recommended by the manufacturer, provide protection course.

END OF SECTION