7.0 DAMPROOFING/WATERPROOFING

7.1 PEEL & STICK MEMBRANE

NUDURA® Damproofing/Waterproofing Membrane is a self adhesive peel and stick membrane designed for below grade damproofing and waterproofing applications. It is composed of styrene-butadiene-styrene (SBS) modified bitumen and a polyethylene woven complex. This surface provides 100% protection from UV radiation. A silicone release paper protects the adhesive side of the membrane.

FIGURE 7.01

Building codes require damproofing/waterproofing when the interior floor level is below the exterior grade level. NUDURA offers a peel and stick membrane that satisfies the code requirements and offers a warranty against manufacturers defects. NUDURA offers three different application scenarios depending upon the code requirements and individuals' preference. The three scenarios include:

1. Membrane applied directly to the face of the wall
2. Membrane with 6"-12" (152 mm-305 mm) liquid applied primer at the grade line and footing junctions
3. Liquid applied primer and membrane over the entire wall

These three methods have been extensively tested and found to perform extremely well on the EPS (expanded polystyrene) foam. It is very important that the surface of the EPS foam be clean and dry before any of the above mentioned methods are started. NUDURA offers two types of membranes that perform well in extremely different climates. The summer grade membrane, identified by a black dotted line on the carrier sheet surface, adheres to the EPS foam in weather conditions of 50° F (10°C) and above. The winter grade membrane, identified by a blue dotted line in the carrier sheet surface, can be applied to the NUDURA EPS foam in temperatures as low as 14° F (-10° C).

Properties	Standards	Nudura Waterproof Membrane	
		Metric	Imperial
Thickness	-	1.0 mm	40 mil
Dimension	-	22.9 x 0.91 m	75 ft x 36 in
Gross / Net coverage per roll	-	20.8 / 19.1 m^2	225 / 206 ft^2
Roll weight	-	20 kg	44 lb
Top face	-	Polyethylene woven complex	
Under face	-	Silicone release paper	
Tensile strength, MD/XD	ASTM D5147	11.3 / 15.4 kN/m	64 / 88 lbs/in
Ultimate elongation, MD/XD	ASTM D5147	52 / 24 %	
Flexibility at cold temperature	ASTM D5147	-30 °C	-22 °F
Static puncture	ASTM D5602	400 N	90 lbs
Tear resistance, MD/XD	ASTM D1876	375 / 400 N	85 / 90 lbs
Lap adhesion	ASTM D1876	2000 N/m	11.4 lbs/in
Peel resistance	ASTM D903	3050 N/m	17.5 lbs/in
Water absorption	ASTM D5147	< 0.1 %	
Water vapour permeance	ASTM E96 (Procedure B)	< 0.90 ng/Pa.s.m^2	< 0.016 perm

(All values are nominal)

7.2 DISCLAIMER ON PRODUCT

Although NUDURA's Peel and Stick Membrane Technical Bulletin and Data Sheet reference the product as a "Waterproof Membrane", other elements of the foundation must also be completed in order for this product to fall under the code requirements of a waterproofing system. It is ultimately the contractor/installer's responsibility to ensure the requirements regarding a "waterproofing system" outlined within the local building codes are met. Should any elements of the building code not be followed, the peel and stick membrane cannot be held as the sole reason for any moisture migration through a foundation wall. For example, the membrane cannot be required to resist the passage of moisture through the wall sections if:

(a) Improper installation of the drainage tile and a method to drain away excess water from the structure has not been provided, and/or

(b) Incorrect sump pump sizing and installation, and/or

(c) The failure to backfill with free flowing granular material or providing an additional drainage layer on top of the membrane as per code, and/or

(d) Final grade has not been established along with proper eavestrough and downspouts.

These must conform according to the local building codes and failure to comply will result in the membrane performing below expectations.

Finally, should the structure incur hydrostatic pressure from the fluctuation of the water table below a building, the membrane cannot act solely as a material to resist these conditions. The contractor/installer must reference the local building codes and follow the requirements outlined within the appropriate sections in the code. NUDURA Corporation will not be held responsible for the incorrect installation of the membrane should it be determined other elements of the code were not properly followed.

7.3 MATERIAL STORAGE AND CARE

Care should be taken to protect the membrane on site from moisture, dust, and general wear and tear. Store membrane rolls in a cool, dry location (not in direct ground contact) and protect with a tarp to prevent exposure until the membrane is ready to be used.

On colder days, store the material in a heated location on site until needed. (A heat gun can also be used to assist in application of the membrane onto the wall).

NUDURA's membrane should not be exposed to sunlight for extended periods of time. Backfilling should take place within 1 week of installing the membrane. If daytime temperature exceeds 80ºF (27ºC) after installation, NUDURA® recommends shading the applied membrane temporarily until backfilling is complete.

FIGURE 7.02

7.4 INSTALLATION

For detailed instructions on how to apply NUDURA Damproofing/Waterproofing Membrane, please refer to the Technical Bulletin on NUDURA Damproofing/Waterproofing Membrane included in Appendix F.

7.5 WARRANTY

NUDURA provides a limited manufacturer's material defect warranty on its peel and stick waterproofing membrane product.

NUDURA® Corporation
5 Years Material Warranty

Product (s):
Subject to the following and conditions, NUDURA® Corporation, a legally constituted corporation with it's registered office at 27 Hooper Road, Unit 10, Barrie, ON, L4N 9S3, hereafter referred to as COMPANY, warrants the above named products, hereafter referred to as MEMBRANES, supplied for the waterproofing of ICF foundations, is free of manufacturing defects.
Should any defects be discovered during the installation or in the 5 year period after the completion of the application of the MEMBRANES, COMPANY undertakes to, at its option:

1. a) supply an equal amount of MEMBRANES for the replacement of the defective membranes, or,
2. b) pay the owner of the building the cost of replacing the defective MEMBRANES as determined by COMPANY at the time of the claim.

This warranty may be enforced only if the purchaser has paid COMPANY in full for the MEMBRANES.
Subject to the other provisions of this warranty and without limiting the generality thereof, COMPANY shall not be held liable or have any obligation if any damage whatsoever is caused by the following, or if repairs are required because of the following, the whole without limitation:

a) faulty or otherwise unacceptable installation inconsistent with the state of the art and/or disregard of, COMPANY's standards and specifications,

b) improper or abnormal use of the MEMBRANES supplied by COMPANY,

c) alteration or modification of COMPANY's MEMBRANES,

d) use of primers, mastics, adhesives and other than those specifically manufactured or supplied by COMPANY to be used with COMPANY's MEMBRANES,

e) faulty building design or construction, abnormal performance of the Building's structure,

f) water infiltration or moisture condensation on, into or around adjoining work or equipment, or at any location under or adjoining the MEMBRANES supplied by COMPANY,

g) alterations, transformations, additions or repairs to the MEMBRANES or installation of equipment or any other device after the MEMBRANES installation,

h) falling objects, regardless of source,

i) acts of God including, without limitation, war, riots, uprising, acts of terrorism and natural catastrophes, including but not limited to floods, hail, lightning, earthquakes and windstorms,

j) movement or deterioration of a material adjacent to the MEMBRANES or incorporated into materials used as a direct or indirect base for the MEMBRANES,

k) chemical damage to the MEMBRANES,

l) use of COMPANY MEMBRANES in the construction of a Building when the Building and/or MEMBRANES has not been designed for such use,

m) a change in the purpose or use of the Building, as well as a change to the Building or to its occupancy, where such change could compromise the effectiveness of the MEMBRANES supplied by COMPANY or make them inappropriate for use in the Building.

The recourse stated herein are the sole and exclusive recourses for failure of the MEMBRANES, and excludes any other claims especially for any kind of damages.
No representative, employee, or agent of COMPANY or any other person, has any authority to assume for COMPANY any additional or other liability or responsibility for COMPANY unless it is in writing and signed by COMPANY's General Manager.

There are no warranties either expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose, which extend beyond the warranties contained in this document. COMPANY shall not be liable for any incidental, consequential or other damages, including but not limited to, loss of profits or damages to the structure or its contents arising under any theory of law whatsoever.
Any claim which may give rise to the COMPANY's liability hereunder shall be made in writing to COMPANY during the Warranty Period, at the address of the Office set forth above, immediately after the defect or deficiency covered by the warranty occurs, failing which this warranty shall not be enforceable upon it. The Owner shall also forfeit its recourse if it effects any repairs, except for emergency reasons, before COMPANY or its agent has had the opportunity to inspect the condition of the premises and issue a written authorization regarding the repair solution and the conditions relating thereto, if any.

NUDURA®Corporation

By:_____

Authorized Signature
®trademark of NUDURA Corporation