07/413 Green Roof Waterproofing
329500 Vegetated Roof Assemblies

HYDROTECH®

Ultimate / Garden Roof® Warranty and Maintenance Instructions

AMERICAN HYDROTECH, INC., 303 EAST OHIO STREET, CHICAGO, ILLINOIS 60611 * (312) 337-4998

ULTIMATE / GARDEN ROOF® WARRANTY

Subject to the terms, conditions and limitations hereinafter stated, American Hydrotech, Inc. (HYDROTECH) warrants to the building owner (Owner) as follows:

A. MEMBRANE WARRANTY. HYDROTECH warrants that the Monolithic Membrane 6125® (Membrane) and Flex Flash UN® (Flashing) will remain water-tight for a period of Ten (10) years from the date of substantial completion of its installation (the Membrane Warranty Period). In the event of the failure of the Membrane or Flashing to perform as herein warranted, HYDROTECH's responsibility shall be limited to making or causing to be made such repairs as are necessary to enable the Membrane and Flashing to perform as warranted. Repairs will include any removal and re-installation of the Products sold by HYDROTECH (including the STYROFOAM® Insulation, Garden Roof® components, LiteTop® soil, and pedestal-installed Pavers) necessary to effect warranted leak repairs. Removal and re-installation of plants and other surfacing materials is not covered under this warranty. HYDROTECH's maximum liability under the provisions of this paragraph shall be limited to an amount equal to the original installed cost of the Membrane and Flashing.

B. INSULATION WARRANTY. HYDROTECH warrants that the STYROFOAM® Insulation (Insulation) will retain 80% of its original thermal value and will remain on the deck withstanding wind speeds not to exceed 70 miles per hour gust wind speed for a period of Ten (10) years from the date of purchase (Insulation Warranty Period). In the event of the failure of the Insulation to perform as herein warranted during the Insulation Warranty Period, HYDROTECH's sole responsibility shall be limited to either providing the Owner replacement Insulation for the non-performing Insulation or, at HYDROTECH's sole discretion, refunding the Owner an amount equal to the non-performing Insulation. HYDROTECH's maximum liability under the provisions of this paragraph shall be limited to an amount equal to the original purchase price of the Insulation.

C. GARDEN ROOF® COMPONENTS WARRANTY. HYDROTECH warrants that the Garden Roof® (GR Products) components listed below , when applied in accordance with HYDROTECH's current specifications and guidelines, will not prematurely disintegrate to the point of failure under normal service conditions for a period of Ten (10 years from the date of their purchase. In the event of the failure of the GR Products to perform as herein warranted, HYDROTECH's sole responsibility shall be limited to either providing the Owner replacement GR Products for the non-performing GR Products or, at HYDROTECH's sole discretion, refunding the Owner an amount equal to the non-performing GR Products. HYDROTECH's maximum liability under the provisions of this paragraph shall be limited to an amount equal to the original cost of the non-performing GR Products.

D. PAVER WARRANTY. HYDROTECH warrants that the Hanover Pavers (Pavers) will be free from defects for a period of Ten (10) years from the date of purchase. For purposes of this Warranty, "defects" shall refer only to any Paver(s), which as a result of freeze-thaw, cracks or delaminates, where such crack or delamination is greater than 1-1/2% loss in dry weight renders the Paver(s) unsuitable for its intended use. In the event the Pavers have failed to perform as warranted, HYDROTECH's sole responsibility hereunder shall be limited to the repair of the defects or the replacement of any non-performing Pavers. For purposes of this Warranty, "replacement" shall be defined as providing replacement Paver(s), F.O.B. Hanover Architectural Products only and shall not include any labor or installation in respect of such replacement. HYDROTECH's maximum liability under the provisions of this paragraph shall be limited to an amount equal to the original purchase price of the Pavers. After 5 years from the original date of purchase, HYDROTECH'S maximum liability under the provisions of this paragraph shall be reduced by a factor of 10% per year of the original purchase price of the Pavers.

CONDITIONS OF WARRANTY. HYDROTECH's obligations under this Warranty shall not be in force or effect unless (a) the Membrane, Flashing, Insulation, GR Products and Pavers (hereinafter collectively referred to as the "Products") are installed in accordance with HYDROTECH's then current published specifications by an applicator authorized by HYDROTECH to install the Products, (b) all of the Products have been sold by HYDROTECH and all of HYDROTECH's and the Authorized Applicator's invoices have been paid in full; (c) no alteration or repairs are made to the Products without the prior written approval of HYDROTECH; and (d) the Owner notifies HYDROTECH of any failure of the Products to perform as warranted herein by written notice, including with said notice a copy of this Warranty, within 30 days of Owner's earliest notice, actual or constructive, of such failure.

LIABILITIES EXCLUDED FROM COVERAGE OF WARRANTY. A. HYDROTECH assumes no responsibility or liability for (1) damage to the substrate or other base over which the Products are installed; (2) the building structure or interior contents thereof; (3) any other property damage or bodily injury, including without limitation, property damage arising out of or relating to the actual, alleged or threatened contact with, exposure to, existence of, or growth or presence of any fungi and bodily injury arising out of or relating to the actual, alleged or threatened inhalation of, ingestion of, contact with, exposure to, existence of, or growth or presence of any fungi ("Fungi" means any form of fungus, including but not limited to, yeast, mold, mildew, rust, smut, or mushroom, and including any spores, mycotoxins, odors, or any other substances, products or byproducts produced by, released by, or arising out of the current or past presence of fungi); (4) incidental or consequential damages including loss of income, loss of time, lost sales, liability Owner has with respect to any other person, or for any type or form of consequential or incidental or economic loss. **B.** HYDROTECH assumes no liability for any failure of the Products resulting from (1) natural occurrences and acts of God, including without limitations of floods, lightning, hurricanes, earthquakes, earth tremors, tornados, whole gale, hail and fire of any origin or causes; (2) structural defects of the building on which the Products are installed; (3) improper application or failure of any component underlying the Products, (4) changes in the original principal usage to which the building is put unless approved in advance in writing by HYDROTECH; (5) the erection or construction of any additional installation in or through the Products prior to or after the completion date, unless done in the manner prescribed and accepted in writing by HYDROTECH, (6) failure of Owner to use reasonable care in maintaining the Products; (7) leaks caused by water entering from structures adjacent to the Products, (8) failure of proprietary (non-warranted) flashing systems; (9) failure of cap flashings and/or gravel stops, (10) deterioration of flashings where water has been allowed to enter behind the base flashing from sources other than through the Products or base flashing, (11) excessive traffic, storage of materials or vandalism, (12) chemical attacks on the Products, (13) the compatibility of the Products with existing environmental conditions; (14) the design of the end use, (15) additional exclusions, if any.

INSULATION TESTING. All sampling shall be conducted in accordance with sampling procedures prescribed by HYDROTECH and samples of the Insulation shall only be taken in the presence of a HYDROTECH authorized representative. Testing of the Insulation samples shall be in accordance with ASTM Test Method C518-85 or the closest HYDROTECH-approved effective equivalent thereof. In the event the claim is not covered by this Warranty, the reasonable costs incurred by HYDROTECH in so determining shall be paid by the Owner.

ACCESS. During the term of this warranty, HYDROTECH, its agents or employees shall have free access for testing during regular business hours to that portion of the Building where the Products are installed. Failure to permit such access shall constitute a waiver of this Warranty by the Owner and shall relieve HYDROTECH from any further obligations hereunder. In the event the claim is not covered by this Warranty, the reasonable costs incurred by HYDROTECH in so determining shall be invoiced to the Owner.

WAIVER. HYDROTECH's failure at any time to enforce any of the terms or conditions stated herein shall not be construed to be a waiver of such provision.

ASSIGNABILITY. This Warranty shall accrue only to the Owner named herein.

DISCLAIMER OF ALL OTHER WARRANTIES. The foregoing is HYDROTECH's sole Warranty with respect to the Products. **THIS DISCLAIMER** and Warranty Agreement is expressly **IN LIEU OF AND EXCLUDES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES.**

EXCLUSION OF ALL OTHER REMEDIES AND LIMITATION OF HYDROTECH'S LIABILITY. THE Owner's SOLE AND EXCLUSIVE REMEDY against HYDROTECH shall be as provided herein. The Owner agrees that **NO OTHER REMEDY SHALL BE AVAILABLE** to it. No representative of HYDROTECH has the authority to make any representations or provisions except as stated herein.

The enclosed conditional warranty, provided by American Hydrotech, Inc. covers the products supplied by Hydrotech within stated limitations. Your choice of the Ultimate Assembly is excellent and should provide you with many years of service. Depending on the type of installation on your facility, there is a certain amount of maintenance, which you should perform to protect your investment. The following are a few suggestions, which may prove useful to your maintenance personnel.

ROOFING/WATERPROOFING MEMBRANE AND FLASHINGS

While in the majority of Ultimate Garden Roof Assemblies the Hydrotech membrane and flashings will be completely covered and protected, there are a few items which should be addressed periodically.

1. SURFACE Roof surface should be kept clean at all times. Inspections of the roof surface should be made several times each year. The pavers and/or stone ballast should be left in place at all times so the filter fabric and insulation remain completely covered. Exposed fabric and insulation will deteriorate due to UV exposure from the sun.

2. DRAINS Examine both roof and plaza deck drains several times each year. Make sure the plumbing and drain openings are not restricted by debris. For a stone ballasted surface, keep larger stones around the drain bonnet.

3. METAL COUNTERFLASHINGS Metal counterflashings divert water over the membrane base flashings. They must be checked periodically and maintained to ensure that they remain in place and prevent water from by-passing the base flashing. Water that gets behind the base flashing may not only find entry into the building but may also seriously affect the performance of the flashing itself.

4. MEMBRANE BASE FLASHINGS While most, if not all, of the membrane base flashings will be covered in a typical Ultimate Assembly, there may be instances where this flashing is exposed. Any exposed flashing should b checked twice each year for any mechanical damage. Even minor scrapes or punctures should be addressed to prevent further damage.

5. NEW INSTALLATIONS/MODIFICATIONS If a new penetration must be made through the membrane or flashings, or if there is to be an addition to the existing building, contact American Hydrotech, Inc. for appropriate tie-in details. The tie-in must be done in accordance with all Hydrotech specifications to continue to meet the conditions of the warranty

6. REPAIR PRODUCTS Do not use any repair product on the membrane of flashing without first checking with American Hydrotech, Inc. for possible compatibility concerns.

ROOF/PLAZA PAVERS

Generally, the Hanover Pavers will require no maintenance. By choosing Hanover Pavers you have chosen an extremely durable paver that stands up to weather extremes and general wear and tear. The application of sealers or other surface treatments to protect the surface is not typically required. Contact Hydrotech for specifics. Following are some suggestions on general cleaning and snow removal.

1. Dirt and debris can be swept away with brooms or power air-blowers. The surface can be hosed down and scrubbed to remove stubborn dirt.
2. If necessary, individual pavers can be easily removed to aid in cleaning out the joints in between the pavers and/or the roof/plaza deck drains.
3. Efflorescence and other staining can be removed by various methods ranging from high pressure washing to the use of masonry/concrete cleaners. The use of chemical agents on the pavers should first be attempted on inconspicuous areas and Hydrotech should be contacted regarding the specific cleaning agent being considered.
4. Snow and ice can be removed from the paver surface with shovels, snow blowers and motorized brush rollers. Chloride-based snow melt materials should be used sparingly if at all.

GARDEN ROOF

Generally, maintenance of the vegetation, if required, is provided by a landscaping professional. Many landscape contractors provide a maintenance contract as part of the installation of the vegetation.

The type and extent of maintenance will depend on the type of green roof (extensive vs. intensive) planted. Watering, weeding, mowing and trimming may all be part of a regular maintenance schedule.

Although the above may appear lengthy and laborious, it represents little time or expense and could save considerable expense by preservation of warranty protection and by extending the service life of the installation.

AMERICAN HYDROTECH, INC.

HYDROTECH

MM 6125

Styrofoam

Garden Roof Assembly

Hanover Pavers

Description

Webster University - Interdisciplinary Science Building
Name of Building

8274 Big Bend Boulevard, Webster Groves, MO 63119
Location of Building

Webster University
Owner's Name

Kirberg Company
Authorized HYDROTECH Applicator

800 Square Feet Protected Membrane Roofing; 3,000 Square Feet Garden Roof Assembly
Area Under Warranty

Gardendrain GR-50, Root Stop HD, Root Stop Tape, SystemFilter, LiteTop Growing Media
Garden Roof Components

August 7, 2017
Date of Completion – Membrane

January 30, 2017
Date of Purchase – Insulation

January 24, 2017
Date of Purchase – Garden Roof Components

March 28, 2017
Date of Purchase – Pavers

AMERICAN HYDROTECH, INC.

By Edward J. Tierney

Title Director, Technical Services

Date August 21, 2017

Authorized Signature

For Owner

Acknowledged and accepted this 16 day of February, 2018

Owner Signature

Director of Facilities Planning & Management