

Attachment A  
Product Specifications

### DESCRIPTION

WeatherWeld is a fully seamless reinforced roof system that is designed to reinforce existing roof systems such as built up, modified, and certain types of single ply. WeatherWeld is made to be the strongest roof system on the market. WeatherWeld created a roofing system utilizing the longest lasting and strongest materials in the world combined through a patented 3D printer that creates a seamless reinforced membrane that is super strong, durable, and designed to last for generations.

The seamless roof system combines ceramic asphalt emulsion with intertwined fiberglass, which creates a seamless membrane that is virtually impenetrable.

### MATERIALS

The materials used in the WeatherWeld built up/single ply roof restoration system include:

- |                           |                                   |
|---------------------------|-----------------------------------|
| 1. Emulsion               | WeatherWeld Asphalt Emulsion      |
| 2. Fiberglass             | WeatherWeld Fiberglass Gun Roving |
| 3. Polyester Ply          | Polyester Fabric Reinforcement    |
| 4. Base Coat              | WeatherWeld Base Coat             |
| 5. Top Coat               | WeatherWeld Title 24 Top Coat     |
| 6. Aluminum Coating       | WeatherWeld Aluminum Coating      |
| 7. Self-Adhering Membrane | Henry Ruftac 600                  |
| 8. Asphalt primer         | Water Based Asphalt Primer        |

### PHYSICAL PROPERTIES

- System Weight: 1.60 lb. per 100 sq. ft (0.72kg) dry.

### APPLICATION EQUIPMENT

1. Graco 1017 Roof Pump with 500' 1" SAE hydraulic hose
2. Towable Air Compressor with 500' ½" air hose
3. Emulsion tanker (delivered to jobsite)
4. WeatherWeld 3D Roof Printer (handheld application machine rented from WeatherWeld on a per job basis)
5. Pressure washer
6. Water hose and water source (enough length to wrap around building)
7. Wet Mil Gauge
8. General PPE
9. General roofing tools

### INSTALLATION

Installation of the WeatherWeld system is accomplished in 6 steps:

1. Wash existing roof until clean.
2. Prepare existing built up, modified, single ply roof, seams, fasteners, walls, roof flashings, drains, and penetrations.
3. Install WeatherWeld (spray application).
4. Install reflective coating system (optional).
5. Install flashings, and additional items listed below.
6. Contact WeatherWeld Representative for final inspection.

Prior to installation, ensure that adhesion testing was conducted in accordance with WeatherWeld adhesion testing procedures to verify a minimum adhesion strength of four (4) pounds per linear inch (pli) for WeatherWeld to the applicable substrates. When calculating material requirements for a particular project, consideration must be given to applicator variance and surface texture.

### REPAIR

1. All necessary metal seam and flashing repairs must be done according to good construction practices, including the removal of all wet insulation and defective materials as identified through a moisture detection survey, such as an infrared scan and replacement with like materials.
2. All seams must be checked, and any loose or damaged seams or fasteners must be resealed/repared.
3. Panels rusted through or not structurally sound must be replaced with new panels.
4. Repair blisters, holes, cuts, cracks, splits, or other surface defects with WeatherWeld materials.

### PREPARATION

1. Confirm local water run-off ordinances and restrictions prior to cleaning roof.
2. Carefully power wash all roof surfaces with clean water to remove debris, rust, scale, dirt, dust, chalking, peeling, or flaking coatings, etc. Do not force water into the roof system or damage roof surfaces. Rinse at least twice to be sure all cleaning agents or contaminants are completely removed to prevent adhesion issues.
3. If the roof surface becomes contaminated with dirt, dust, or other particles at any time during the application of the WeatherWeld system, cleaning measures must be taken to restore the surface to a suitable condition.
4. Ensure roof is dry prior to application.

### FLASHING

NOTE: All flashings must have 500 mills DFT (dry film thickness) of WeatherWeld Composite installed extending 24" in each direction prior to completion of the project.

**PERIMETER EDGE ROOF FLASHING SYSTEM:** Replace perimeter edge flashing system with new.

Ensure existing roof flashings, including sheet metal flashings, base-flashings, and drains or gutters, are in serviceable condition. If items are installed incorrectly, items should be replaced with new.

The following items are required to be in watertight condition for a WeatherWeld warranty to be issued for the project:

1. Drains and Scuppers
2. Sheetmetal Coping
3. Counter-Flashings
4. Perimeter and Edge flashings
5. Equipment Platforms and Sheetmetal Pans
6. Expansion Joints
7. Sheetmetal Ducts and Seals
8. Electrical Enclosures and Conduits
9. Transition Flashings
10. Any other item that could affect the watertight integrity of the WeatherWeld Seamless Roof System

### WEATHERWELD SEAMLESS ROOFING APPLICATION

Apply one layer of the composite roofing at the following ratio:

1. Asphalt Emulsion (undiluted): 30 gal. per 100 square feet (12.2 L/m<sup>2</sup>).
2. Fiberglass Reinforcement: 16 lb. per 100 square feet (0.78 Kg/m<sup>2</sup>).

- No water or other material may be added to the emulsion to thin or extend pot life.
- Fiberglass must be disbursed from the applicator in varying intertwined lengths, up to 24 inches (610mm).
- Thoroughly mix fiberglass and emulsion prior to application on roof surface.
- Any loose strands must be brushed by hand, removed or filled-in with emulsion to create a solid surface.
- Upon completion, no area may be less than 250 mil dry film thickness (DFT).
- Install additional material at all roof flashings, 500 mills (DFT) of WeatherWeld composite installed, extending 24" in each direction prior to completion of the project.
- Areas such as base flashings and penetrations, where application exceeds 500 mills wet, must be brushed by hand to prevent surface crazing.

### REFLECTIVE COATING INSTALLATION\*

Prior to reflective coating application, wash the roof surface with water. Do not commence application until the system has thoroughly dried, as registered by a reading of zero on a calibrated moisture meter.

1. Acrylic Title 24 Coating Application: Apply Title 24 roof coating at a minimum of 1 1/2 gal. per 100 square feet (0.6 L/m<sup>2</sup>). in each of two passes to total 3 gallons per 100 square feet (1.2 L/m<sup>2</sup>). Back rolling is recommended to ensure even coverage throughout.
2. Energy Star rated Aluminum Coating Application: Apply Aluminum coating at a minimum of 2 gal. per 100 square feet (1.0 L/m<sup>2</sup>).

\*Reflective coating system is optional. Refer to local codes for Title 24 or Energy Star requirements.

### ROOF ACCESSORIES (INSTALL AFTER REFLECTIVE COATING SYSTEM)

Walkway Pads (optional) or Non-Slip Walking Surface  
Polymer Pipe Supports  
Storm Collars on Pipes  
Coping Caps and Flashings  
Access Hatches and Ladders  
Drain Rings and Screens

### INSPECTION

Inspect entire roof area and touch-up deficient areas with WeatherWeld or reflective coating as necessary to ensure complete and uniform coverage. Special attention should be given to critical areas of roof, including roof penetrations, transitions, existing membrane seams, flashings, and drains.

### LIMITATIONS

These are general guidelines for application of the WeatherWeld Seamless Roof System. The material requirements may vary depending on the specific job requirements. If unusual conditions exist, contact your local WeatherWeld Representative.

WeatherWeld Seamless Roof Systems must be applied to structurally sound substrates and properly prepared surfaces. All surfaces must be clean and dry before application of coatings. WeatherWeld Seamless Roof Systems must not be applied over wet insulation or roofing materials. Failure of the substrate does not constitute failure of the WeatherWeld coating or system. WeatherWeld Seamless Roof Systems are designed for use on roofs with positive drainage.

1. Product application must not be done when rain or other conditions such as fog or heavy dew are possible within a 48-hour period.
2. Roof surface must be at least 6 Fahrenheit degrees or 3 Celsius degrees above the dew point and rising. Surfaces must always be clean before application of product. Care must be taken to ensure that debris accumulation after original cleaning does not interfere with any stage of the applications. If either condition occurs, then additional cleaning may be required.
3. Drying time is affected by numerous factors, including temperature, direct sunlight, relative humidity, air movement, thickness, etc. Higher temperature and/or humidity will result in faster cure times. Lower temperature and/or humidity may extend cure times.
4. Do not thin or add water to materials to extend pot life.
5. Proper thickness is essential to performance. The minimum coverage rate of 250 mil DFT (dry film thickness) 1/4" (.250) must be achieved throughout the entire Seamless Roof System assembly and must be verified using a wet mil gauge during application. Multiple coats may be necessary depending on weather and time of year.
6. Deviations from these application guidelines and specific material requirements may seriously affect the roofing system performance and are strictly prohibited.
7. Applicator must comply with all applicable local, state, and federal regulations if lead-based paint or other hazardous materials are encountered.
8. Roofing is hazardous work and coatings are very slippery when wet. Comply with fall protection rules and regulations.
9. Proper PPE including, but not limited to: Safety Glasses, Gloves, N95 Mask, Hardhat, Footwear, and Protective Clothing must be always worn.

### COLD WEATHER RESTRICTIONS

Do not attempt application if ice, snow, moisture, or dew is present. Ambient temperature must be 50°F (10°C) and rising through the day. Restrict application when overnight temperature drops below 40°F (4.4°C). Cooler temperatures will negatively impact the properties of the system. Contact your WeatherWeld Representative for proper cold weather applications.

### HOT WEATHER RESTRICTIONS

Do not attempt application if moisture or dew is present. Ambient temperature must be less than 110°F (43°C). Contact WeatherWeld Representative for proper hot weather application.

### STORAGE

WeatherWeld on the job site should be stored in a shaded ventilated area under a tarp. Do not store in direct sunlight. Storage temperature must range from 60-80°F (15°C to 26°C). Indoor ventilated storage is recommended when ambient temperature is below 60°F (15°C) or above 80°F (26°C).

### WARRANTY

40-year Warranty: a written leak free guarantee that covers against roof leaks for 40 years.

Owner responsibilities include ensuring roof drains stay clean and facilitate WeatherWeld roof inspections every 10 years.

*\* Reflective coatings are not included in WeatherWeld Leak Free Guarantee. Optional reflective coating warranties are available. Contact WeatherWeld Representative.*

For specifics, see the 40-year Warranty sample and Warranty Guide.



### 40-YEAR NDL LEAK-FREE WARRANTY

COMPLETION DATE: \_\_\_\_\_

ISSUE DATE: \_\_\_\_\_

**WARRANTY:** Subject to warranty registration, payment in-full and installation in accordance with current printed installation specifications, Liquiform Technologies Inc., (WEATHERWELD) warranties to the original purchaser that the WEATHERWELD Seamless Reinforced Roof System (System) will be able to withstand ordinary wear of the natural elements in a leak-free condition for the period of forty (40) years, except for the exclusions, limitations and exceptions set forth in this Warranty. Upon proper notice, WEATHERWELD will diagnose and make repairs to the WEATHERWELD System at WEATHERWELD expense under the terms of this Warranty, as required to stop reported roof leakage found to be caused by defects in the WEATHERWELD System.

**UNAPPROVED ALTERATIONS OR ADDITIONS:** No contractor, distributor, consultant or any other person has authority to assume responsibility, liability or changes to WEATHERWELD specifications and/or agreements. WEATHERWELD shall not be responsible or liable for any change and/or amendment to the specifications and/or Warranty in regard to the project referenced herein, unless said change or amendment is approved in writing by WEATHERWELD.

**EXCLUSIONS/RESPONSIBILITIES:** The WEATHERWELD Seamless Reinforced Roof System is designed to keep areas to which the WEATHERWELD System materials are applied in a leak-free condition. The System is not intended to take the place of any other building element such as, but not limited to, the underlying roof deck, roof insulation, vapor retarder, drains, expansion joints, flashings, vents, skylights, roof-mounted equipment, reflective coatings, or any areas not covered with WEATHERWELD System materials. This warranty shall not be applicable if, in the sole judgment of WEATHERWELD, any of the following occurrences shall be the cause of the reported claim of WEATHERWELD System roof leakage:

- a) Natural disasters, earthquakes, lightning, hurricane force winds, hail, flood, environmental fallout, acts of vandalism or war.
- b) Acts of negligence, misuse, accidents, falling objects, damage from roof top traffic or storage on the roof.
- c) Damage caused by failure to conduct, or to have conducted, periodic maintenance inspections and roof clean-up as outlined in the NRCA or RIEI maintenance manuals for Owners. Reflective surface coatings are not required to be re-coated under this Warranty.
- d) Changes, alterations or repairs made to the System and not authorized by WEATHERWELD shall cause the area affected by the work to be excluded until authorized repairs meeting WEATHERWELD standards are completed.
- e) Changes in aesthetics, visual appearance or reflective coatings. Maintenance of coatings is not a part of, nor required, under this Warranty.
- f) With the exception of natural rain water, accumulation of foreign materials or chemicals of any type including animal, plant, human, manufacturing or atmospheric.
- g) Malfunction or breakdown of the base roofing structure.
- h) Obstructed or inadequate roof drainage.
- i) Waterproof defects in adjoining areas, walls, windows, roof-mounted equipment, ducts or other penetrations in the System extending above the flashings height of the WEATHERWELD System.

Both the examination and inspection of the WEATHERWELD System in fact, plans and/or specifications by a WEATHERWELD employee, designated representative or Contractor, before or after the completion of the installation of the WEATHERWELD System, shall not constitute approval or waiver of the exclusions and conditions set forth in this Warranty, without written notice of such approval or waiver. No waiver by WEATHERWELD of any limitation, term or condition of this Warranty made as part of a warranty claim, shall operate as a waiver of any other limitation, term or condition applicable to this Warranty, on any other future claim, whether of similar or different nature. Owner agrees to provide, at Owner's expense, access to any areas requested in writing by WEATHERWELD and deemed to be relevant to the diagnosis and/or repair of the reported leak. Areas include, but are not limited to, building interior, exterior, adjoining areas and areas under roof-mounted equipment or other overburden.

**NOTICE OF CLAIM:** In the event leakage is discovered, the Owner shall notify WEATHERWELD within ten (10) days of the discovery via receipt-acknowledged email, writing or fax at the contact's location listed below. Any claim to which notification is not made in a timely manner, without excuse, or to which access to the roof to diagnose the cause of the leakage is not provided, shall be deemed waived. Notification shall contain information of the location and severity of the leakage, access to the leak area and the personnel to contact. Notice to the Contractor, distributor or any other person does not substitute for notice to WEATHERWELD. Address written correspondence to Liquiform Technologies Inc., 9757 7th St. #803, Rancho Cucamonga, CA 91730. Phone (888) 440-3224

**SERVICE:** Upon proper notification, WEATHERWELD shall schedule a diagnosis inspection of the leakage, prepare a written report of findings and commence repair of the defects that are WEATHERWELD's responsibility under this Warranty in a timely manner, weather and schedules permitting. Should the cause of the leakage be able to be corrected during the initial service call, the Owner agrees that WEATHERWELD is hereby granted permission to make such corrections, provided there is no cost to the Owner. Should leakage documented by WEATHERWELD be caused from items that are the upkeep responsibility of the Owner under this Warranty, the Owner agrees to have repairs made to such items in a timely manner, and before requesting any additional service work made by WEATHERWELD on the leakage claim. Should WEATHERWELD repeat the process without stopping the WEATHERWELD responsible leakage, WEATHERWELD shall retain a knowledgeable outside consultant at WEATHERWELD expense to help locate the source of the leakage. WEATHERWELD and the Owner agree to complete the respective repairs made in the Consultant's report. The Owner agrees that WEATHERWELD shall have exclusive control over the diagnosis and repair to any WEATHERWELD System component found to be WEATHERWELD responsibility under this Warranty.

**LIMITATIONS OF LIABILITY:** This Warranty is expressly in lieu of any other guarantees and/or warranties, expressed or implied, including any implied warranty of merchantability, or fitness for a particular purpose, and any other obligation or liability on the part of WEATHERWELD whether the claim against WEATHERWELD is based upon strict liability, negligence, breach of warranty, or any other theory or cause of action. This limited Warranty contains all of the provisions of your remedies from WEATHERWELD. In no event shall WEATHERWELD be liable for consequential or incidental damages of any kind, including damages to the building or its contents. This Warranty does not cover the cost of removal and/or replacement of any other building component, roof-mounted equipment, overburden or item excluded from Warranty coverage listed above. WEATHERWELD shall be discharged of all further obligations upon the occurrence of any of the following: (a) expiration of this warranty without written renewal or transfer, (b) damage to the System from causes listed in "EXCLUSIONS/RESPONSIBILITIES" or (c) failure to comply with any other sections of this Warranty. Unresolved Warranty claims shall be settled by binding arbitration in the State of California (as exclusive venue), administered by the American Arbitration Association under its Commercial Arbitration Rules, and judgment on any award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

**REGISTRATION**

**PROJECT NAME:** \_\_\_\_\_

**SPECIFICATION:** \_\_\_\_\_

**AREA DESCRIPTION:** \_\_\_\_\_

**AREA EXCLUDED:** \_\_\_\_\_

**DECK TYPE:** \_\_\_\_\_

**BUILDING USE:** \_\_\_\_\_

**ARCHITECT:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**CONTRACTOR:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**OWNER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**LIQUIFORM TECHNOLOGIES INC (WEATHERWELD)**

**ADDRESS:** 9757 7<sup>th</sup> Street #803, Rancho Cucamonga CA 91730

**PHONE:** (888) 440-3224 **EMAIL:** tech@weatherweld.com

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

SAMPLE