Expandothane Seamless Roof System

General Application Essentials

EXPANDOTHANE
SEAMLESS ROOF SYSTEM

CONDITION OF ROOF BEFORE APPLICATION

1. **Roof must be structurally sound and leak-free** (meaning all repairs to leaking areas must be made prior to installation of a full system. All unsound surfaces must be repaired or replaced.
2. **Surfaces and substrates must be dry**. All roof surfaces and substrates must be completely dry before application. Materials (insulation, roofing details, etc.) retaining moisture, saturated, or holding water must be replaced.
3. **Surfaces must be clean.** The systems surface must be clean and must be clear of loose aggregate, dirt, oil, soap, or any substance or circumstance that may impair adhesion. CAUTION: If dirt or non-designed foreign elements to the roofing surface are atop the surface, the ***ESRS*** will adhere to the foreign object and not the desired and intended surface, i.e., the actual roof substrate.
4. **All organic material must be specially treated**. Any place on the roof where there has been composting in the past (residue from leaves and other organic material) must be specially treated. Look for areas on the roof such as under a tree or low spots where organic debris would accumulate. After pressure washing the roof, all organic residues must be neutralized by washing the area with a biodegradable cleaner, non-oil based. Spread the solution over the area to be cleaned and work in with a broom. Let it sit for 20-30 minutes, then agitate again, and then wash off. A floor scrubber with a scotch-brite pad can be used with the same method. Let dry before application of the ***ESRS***.
5. **Surface must be prepared properly.** Surface preparation must always be in accordance with the highest standards of trade practices. (See **Coverage Rate Chart** on page 3 for application rate of roof types and refer to ***Roof Specifications*** for preparation details of roof types).
6. **Material storage and handling.** Care must be taken in the storage and handling of the ***ESRS***. Do not freeze. Do not ship or store the ***ESRS*** unless protection from freezing is available. In its liquid form, the ***ESRS*** will freeze and become unusable at temperatures below freezing (30ºF or -1.1ºC).

Condition of Roof Prior to Application Checklist

- ✓ **Roof MUST Be Structurally Sound and Leak-Free.**
- ✓ **Surfaces and Substrate MUST be dry.**
- ✓ **Surfaces MUST be Clean.**
- ✓ **Roof MUST be Properly Prepared.**
- ✓ **Temperature Cannot be Below 35 Degrees.**

CONDITION OF ROOF AT TIME OF APPLICATION

Weather

Temperature: The ***ESRS*** must be applied at temperatures above 35ºF and rising. The ambient air temperature, the surfaces to receive the ***Expandothane Seamless Roofing System***, must be at 40ºF or higher.

Moisture or Freezing Temperatures: Do not apply the ***ESRS* when measurable precipitation or freezing is possible within 72 hours of application.

Unacceptable Conditions to Applications

The following are not acceptable conditions:

- Un-adhered bridge
- Unsaturated or exposed Poly-Mesh fabric
- Puddles or blobs of ***ESRS***
- Exposed pin holes
- Too little or too much ***ESRS*** applied at one time

The *ESRS* Coverage Requirements

Utilizing a minimum of 2.5 gallons per 100 square feet, the ***ESRS*** must result in a minimum DFT roof system thickness of 2.5 gallons (.250 depending on roof substrate). Coverage may vary depending on roof substrate and may require up to 3 gallons (.300 DFT) per 100 square feet, depending on the roof condition, and/or the surface thereof (i.e., cleanliness, absorption rate, surface texture, age, roof topography, protrusions, etc.). See the ***ESRS*** Coverage Rate Chart on page 3 for minimum requirements on specific roof types. It may be necessary to apply the ***ERSR*** topcoat at a rate of 1 additional gallon per 100 square feet to ensure minimal required thickness in all areas of the roof. System coverage requires about 25% additional coating for walls, protrusions and vertical or angled planes than for horizontal planes.

****NOTE****
System coverage requires approx. 10% more System for surfaces like walls, protrusions, and other vertical or angled planes.

CAUTION: Care must be taken to assure that neither too little nor too much of the ***ESRS*** is applied at one time. No single liquid application should be applied to exceed a dry film thickness of 250 mils (.250), which is approximately 2.5 gallons per square.

ADDITIONAL CAUTION: Check the roof each morning for the collection of dew or condensation. If there is moisture accumulated in low spots on the roof, mop up the water and allow the area to dry completely before proceeding. Fans or air movers may be used to accelerate dry time. If a yellow/brown residue is found in the birdbath areas of condensation, dry as detailed above and then clean the areas with ***Isopropyl Alcohol***, rinse and let dry completely before proceeding. Grout sponges are suggested to mop up wet cleaned areas. These areas must be treated with a coating, mesh, coating application. If this residue is not cleaned properly and treated as detailed above, you may encounter adhesion issues with your topcoat in the future.

The *Expandothane Seamless Roof System* Coverage Chart

Use the ESRS Coverage Guideline Chart as an estimating gauge only. Because every roof surface is different, the coverage varies, depending upon existing roof materials and surface conditions. Factors to consider are cleanliness, absorption rate, surface texture, age, roof topography, protrusions, influence of use, etc. System coverage requires about 10% more coating for walls, protrusions, and other vertical or angled planes than for the flat roof.

Existing Substrate	Coverage Guideline Chart - Estimate Only - Actual specification may vary. NDL warranty requires custom specifications. *ESRS* to achieve a minimum .250 mils (DFT) at all times. Warranted systems require a min. of .250 mils & up (except metal)		
	Minimum Gallons for 20-Year Material Warranty	THIS AREA INTENTIONALLY BLANK	
Built-up (BUR)	3		
PVC	2.5		
EPDM	2.5		
Hypalon	2.5		
Rubbers	2.5		
Modified Bitumen APP Cap sheet	2.5		
Neoprene	2.5		
Polyurethane Foam	2.5*		
Cap Sheet SBS or APP granular or other	2.5		
BUR with gravel or rock (scraped)	3*		
Metal	2.5		
Concrete	2.5		
Existing System with embedded fabric	-		
Existing System without embedded fabric	- (Requires embedded Poly-Mesh)		

**** Depending on the final condition of substrate after prep work and repairs.***

Recommended Equipment for the *ESRS*

Heavy Duty Rollers

- Rollers used should be of the highest quality and heavy duty. Rollers should be 18 inches wide with a support on each side of the roller.
- Standard 9-inch wide rollers may be used for small jobs, depending on personnel, job size, tool quality, and other conditions.
- The roller nap should be a 3/8” or 11/4”.

VERY IMPORTANT!
It is imperative that all rollers used to apply the ***Silicone*** have a 3/8” – 11/4” nap.
Using improper equipment may result in inadequate coverage!

Airless Spray Equipment

- Airless spray equipment must be heavy duty as follows: Airless spray equipment ratings should be at least 3 gallons per minute at 3000 psi and be able to handle 120 K.U. materials.

- The airless hose should be a minimum 3/8” inside diameter for an application utilizing 150’ or less. Consult with airless pump manufacturers for hose size requirements [inside diameter to length] when using lengths longer than 150’.

- Use a reversible tip in an average size from .33 to .50. Again, consult with airless pump manufacturer for capacity and capability. Exact size requirements may vary, depending upon several factors, such as pump capacity, roof surface topography, vertical lift between pump and application surface, hose length, temperature, personnel, etc.

Airless Spray Equipment		
Rating		**3 gallons per minute @ 3000 psi**
Hose Size Minimum (inside diameter)	**150’ or Less**	**3/8” inside diameter**
	More than 150’	**Consult with equipment manufacturer**
Reversible Tip Size ** First number before the decimal point is the fan width of the tip.		**.33 to .50 ** Exact size may vary, consult with equipment manufacturer.**

Optional Items

Smaller rollers for small jobs: Depending on personnel, job size, tool quality, and other conditions, it is possible to apply the ***ESRS*** using standard 9-inch wide rollers.

Paintbrushes

A paintbrush may simplify many applications, especially on roof protrusions such as pipes. A paintbrush is optional but not a replacement for rollers. A paintbrush used alone without rollers or roofing brushes cannot ensure proper adhesion and impregnation of the Poly-Mesh.

Safety

Install all materials in strict adherence with all published safety data and/or requirements, appropriate governing codes, weather condition cautions, the manufacturer’s instructions and in accordance with the highest trade practice standards.

*******TIP*******

ESRS recommends all roof systems be applied with squeegees and heavy- duty paint rollers, paintbrushes and airless spray equipment.

Recommended Application Equipment

3/8” or ½” Nap – 9” long

5 ft. pole / Handle Stick

Squeegee handle stick / and 18” roller frame handle stick

Knee Pads

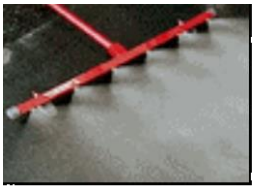
Heavy Duty Squeegee

9”Heavy Duty Roller Frame

3” Paint Brush (Inexpensive)

16” Stiff street broom

Clean up bags



Water Broom

3/8” or ½”– 18” Long

18” Roller Frame

Pressure Washer 2500 p.s.i. or Higher

Water bucket to wash hands

Safety glasses / UV protection

Good cutting Scissors

Contractors Gun

Use a reversible tip
Tip size .33-.50

Airless Sprayer 3000 psi or Higher to spray ESRS™
(Recommended, not required)

Spatula / to clean the ESRS™ out of the buckets

3ft. Extension Wand

High-pressure hose With 3/8 id (Inside Diameter)