



## **Specialty Solutions PM427 Architectural Specification.**

### SECTION 07.13.53

#### Fluid Applied Elastomeric Sheet Membrane

**PerfectMembrane (PM) Reinforced Elastomeric laminate system for use as an asbestos encapsulation, substrate reinforcement, crack isolation, and deck underlayment waterproofing membrane that bonds with top coatings and systems.**

#### **PART 1 – GENERAL**

##### **1.01 SUMMARY**

A. Description: This section includes a fluid applied 25 mil reinforced elastomeric laminate deck membrane system. The system can be applied under and in conjunction with RubberDecky, SandRich, PaintPlus, cementitious overlay products, and resinous deck systems.

B. Section Includes: Reinforced elastomeric composite membrane system, complete with surface preparation, with all flashing and other related work required to perform a complete installation of the Specialty Solutions PerfectMembrane system.

##### **1.02 REFERENCES**

A. American Society for Testing and Materials (ASTM) 1998 Annual Book of ASTM Standards

1. Designation : D6083-97a Standard Specification for Liquid Applied Acrylic Coating Used in Roofing
2. Volume 04.04 Roofing, Waterproofing, and Bituminous Materials
3. Volume 06.01 Paint - Tests for Chemical, Physical, and Optical Properties; Appearance

B. National Roofing Contractors Association (NRCA)

1. Roofing and Waterproofing Manual (4th Edition)

C. Factory Mutual Approval Standard 4470

1. Standard for Class 1 Windstorm Pressure, Uplift, Hail Damage, Resistance to Foot Traffic, Susceptibility to Leakage.
2. Standard for Class A Spread of Flame Fire.

##### **1.03 SYSTEM DESCRIPTION**

A. Performance Requirements:

1. Provide a fluid applied reinforced elastomeric composite membrane system in accordance with manufacturer's performance criteria without defects, damage, failure, or infiltration of water that is compatible with most cementitious, and resin based top coatings materials.
2. Coatings to be used in the membrane system shall meet or exceed all minimum testing requirements listed in ASTM D6083 Standard Specification for Liquid Applied Acrylic Coatings Used in Roofing and waterproofing.



3. PerfectMembrane stops in-plane cracks up to 1/8" (3 mm) wide at the subfloor from telegraphing through to overlay coatings system. Use for residential to extra heavy commercial applications.

#### **1.04 SUBMITTALS**

- A. Product Data: Provide written technical information and installation instructions from Specialty Solutions which demonstrate that materials to be installed comply with contract documents.
- B. Submit shop drawings indicating details showing treatment of transitions, edges, closures, penetrations, etc.
- C. Verify field measurements and submit materials list, including quantities, to be applied to achieve specified membrane thickness.
- D. Submit 2-year contractor warranty against leaks and/or defects in workmanship. Upon notification of any such defects, within the first 2 years, the contractor will make the necessary repairs. Warranty shall be signed by an authorized representative of the contractor.
- E. Submit written verification that the existing roof drain lines are reasonably free of obstruction prior to application of Specialty Solutions product.
- F. Submit Specialty Solutions Safety Data Sheets (SDS).

#### **1.05 QUALITY ASSURANCE**

- A. Applicator Qualifications: Applicator who has proven experience in the installation of work similar to that required for this project for a period of 5 years or more.

Certificate: When requested, submit certificate indicating applicator qualifications.

Completed project reference list: When requested, submit a list of three (3) projects of similar nature using products of the type specified herein. List shall include the following: Project name and location, size, cost, contact person and phone number.

- B. All details must be installed in conformance with the current Specialty Solutions specifications and/or detail drawings.
  - C. When the contractor is not a factory certified installer, final inspection by an authorized representative of Specialty Solutions may be required for warranty. Final inspection shall not replace the normal responsibilities of the contracting parties. Request for final inspections must be forwarded, along with a roof /deck plan, to Specialty Solutions upon substantial completion of the project for any warranties to be provided. Any deviations from Specialty Solutions specifications must be noted on the deck plan drawing. Product or specification substitutions not approved by SSM, or those that deviate from industry standard good practices, void any assumed or otherwise implied warranty.
  - D. Provide all primers, coatings, reinforcement fabrics and accessories as manufactured and/or approved in writing by Specialty Solutions.

#### **1.06 DELIVERY, STORAGE AND HANDLING**

- A. Furnish Specialty Solutions coating system materials and component accessories in Specialty Solutions manufacturer's original containers and/or wrapped bundles, clearly indicating the Specialty Solutions label and other identifying information.
- B. Store materials separated from the ground and in a dry location, protected until installation in accordance with Specialty Solutions instructions.



- C. Handle materials in accordance with Specialty Solutions recommendations.
- D. Protect materials against freezing. Store materials between 50°F and 85°F.

### **1.07 PROJECT CONDITIONS**

A Acceptable Substrates: for the PM4274Q Include but are not limited to: concrete, wood, vinyl, metal, stucco, steel, single ply membranes, epoxy, tile, concrete overlays, tile, adhesive mastic, non friable asbestos, painted surfaces. APP Modified Bituminous Roofing, SBS Modified Bituminous Roofing, Granular Surface Roll Roofing, OR other substrates approved in writing by Specialty Solutions

B. Substrate: Prior to starting membrane system installation work, complete all substrate corrective actions required, including but not limited to, removal and replacement of deteriorated flashing, deck substrate, as needed. Substrate shall be cleaned, smooth, dry, and free of debris.

### **1.08 ENVIRONMENTAL CONDITIONS**

A. It is the responsibility of the applicator to determine if present and forecast weather conditions are acceptable for application of Specialty Solutions systems. To qualify for warranty, a log book of project weather conditions during application is to be kept by project foreman.

B. Do not apply when snow, rain, or fog is expected before the membrane will have a chance to cure.

C. Do not apply coatings when the temperature of surfaces to be coated and/or surrounding air temperatures are less than 45°F or when rain or freezing temperatures are expected within 24 hours.

D. Do not apply Specialty Solutions coatings when the dew point can be reached before the coatings have sufficiently dried or cured. Special consideration must be given during spring and autumn applications for rapid temperature changes near sunset, shortened workdays may be required.

E. Allow wet surfaces to dry thoroughly and to attain temperature and conditions specified before proceeding with or continuing coating operation.

F. Wind conditions must be considered during application of products to avoid damage to adjacent surfaces or completed work. Provide for protection of other surfaces or do not spray apply coatings if overspray will be deposited on surfaces not intended to be coated.

### **1.0 SAFETY REQUIREMENTS**

A. Users should familiarize themselves with appropriate Material Safety Data Sheets (MSDS). MSDS must be available at all worksites where materials are being used.

B. Materials shall be applied in accordance with all applicable local, state, and federal regulations.

C. A respirator should be used when spraying: Specialty Solutions coatings to protect applicators from overspray particles.

D. When applying reflective white coatings to a roof, sunglasses should be used to protect eyes from glare.

E. Handle on pails should only be used to hand carry pail and should not be used to hoist pail from ground to roof.



F. All work shall be performed in conformance with the safety procedures outlined in the current FALL PROTECTION GUIDE as published by the Occupational Safety and Health Administration (OSHA). Information regarding OSHA Standards are available on the internet at [www.osha.gov](http://www.osha.gov).

G. Care should be taken to avoid overhead power lines and arcing potential.

**1.10 WORK SEQUENCE**

A. Sequence of operations is at the applicator's option providing it is arranged to maintain the building dry during the life of the Contract. Schedule and execute work to prevent leaking.

B. The building shall be occupied. Do not disrupt activities in occupied spaces.

**1.11 WARRANTY**

A. Once all standards and certifications herein are certified, Specialty Solutions warranty. All invoices must be satisfied.

B. Furnish contractor 2-year materials only warranty. The conditions of the contractor warranty may vary, however the occurrence of leaks caused by defects in workmanship will be remedied at no cost to the building owner according to provisions of the contractor warranty.

**PART 2 – PRODUCTS**

**2.01 FLUID APPLIED REINFORCED COMPOSITE MEMBRANE SYSTEM**

A. Manufacturer: Specialty Solution Inc.  
119 S. Third Street  
New Hyde Park, NY 11040

<b>Contact</b>	Jason Finer
<b>Address</b>	119 S. 3d St. New Hyde park, NY 11040
<b>Phone</b>	(718) 736-8477
<b>Fax</b>	(516) 750-9781
<b>E-mail</b>	Info@PerfectPrimer.com
<b>Website</b>	PerfectPrimer.com

B. Substitutions: None

**2.02 MATERIALS**

A. The Specialty Solutions PM427 System shall include but not be limited to:

- |                                 |                     |              |
|---------------------------------|---------------------|--------------|
| 1. SSM Elastomeric Basecoat     | PerfectPrimer       | Series 4274Q |
| 2. Polyester reinforcing fabric | PolyTex Deck Fabric | Mesh 2000    |

B. SSM Inc Minimum Material Properties



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1. Elastomeric Coatings – Elastomeric coatings shall be water-dispersed 100% acrylic elastomeric coatings designed for use in reinforced composite membrane systems. Materials shall meet the following minimum specifications:

**Liquid Coating Property Requirements 4274Q**

Solids by Weight

	Minimum	ASTM
Weight Per Gallon	12.0 lbs.	D-1475
Solids by Weight	67%	D-1644-A
Solids by Volume	53%	D-2697
Viscosity	125 - 140 KU	D-562-A

**Cured Film Physical Property Requirements 4274Q**

	Minimum	ASTM Standard
Low Temperature Flexibility @ -49° F	passes	D522-93A
Percent Elongation (break) @73.4° F	196% 245% h	D-2370
Tensile Strength (psi) @73.4° F	236 psi	D-2370
Permeability (20 mil film) @73.4° F	<21.9 perms	D-1653-B
Water Swelling @73.4° F	9.2	D-471
Accelerated weathering Fungi Resistance	2 years-no effect Zero rating	G-53

Cured Film shall also pass Rain Permeability testing according to ETP-1375, Mil-Std-810E, Method 506.3, Proc.III

2. Reinforcement Fabric – Stitch-bonded polyester for use in cold fluid applied membranes that shall provide high strength and good elongation.

**Mesh 2000 Fabric (Average typical properties)**

	Results	ASTM Standard
Tensile strength	WARP=74lb / WEFT=45lb	D-5034
Elongation	WARP=21lb / WEFT=51lb	D-5034
Ball Burst	111 lbs	D-3787
Mullen Burst	176.8 lbs	D-3786
Tear Strength	WARP=14lb / WEFT=24lb	D-1117

**Cured PerfectMembrane Properties**

Exceeds ANSI A118.10 Specifications for Waterproofing and ANSI A118.12 Specifications for Crack Isolation Membranes.



**2.03 APPLICATION EQUIPMENT**

	Results	ASTM Standard
Tensile strength	WARP=74lb / WEFT=45lb	D-5034
Elongation	WARP=21lb / WEFT=51lb	D-5034
Ball Burst	111 lbs	D-3787
Mullen Burst	176.8 lbs	D-3786
Tear Strength	WARP=14lb / WEFT=24lb	D-1117

A. SSM PerfectPrimer coatings shall be applied by brush, roller, or spray. When applied by spray it is recommended that an airless spray rig with a 3000PSI +/- be used with tip sizes .019 through .036 orifice size. Application by roller or brush may require additional coats, but material requirements will remain the same. In all cases, the specified minimum membrane thickness must be achieved.

**2.04 RELATED MATERIALS** Related Products Supplied By Specialty Solutions:

1. TrueGrit cellulose filler to make PhillyPutty crack filler
2. IronBack Rust converter/ Primer
3. SlabTight Vapor barrier /Primer
4. RubberDecky Elastomeric deck overlay
5. SandRich Thermo-Plastic resin and quartz overlay system
6. Clear Epoxy Resin for plain or chip floors
7. TopSealer deck wearcoat for all SSM Systems

**Part 3 EXECUTION**

**3.01 MANUFACTURERS INSTRUCTIONS**

A. Compliance: Comply with SSM product data, recommendations, and installation instructions for substrate verification, preparation requirements, and installation.

**3.02 EXAMINATION**

A. Examine the substrates, flashing conditions, penetrations, equipment supports, curbs, adjoining construction and the conditions under which the work is to be installed. Do not proceed with the work until unsatisfactory site conditions have been corrected and substrate is acceptable.

B. Applicator shall be responsible for providing a proper substrate to receive the SSM PerfectMembrane system.

C. Verify that substrate is dry and free of oil, grease, dust, rust, or other contaminant.

D. Defects in substrate shall be noted and work shall not proceed until such defects have been corrected.



### 3.03 PREPARATION

- A. Do not proceed with installation until projections through the SSM membrane such as piping, drains, conduit, vents and ducts have been installed. Holes shall be patched or filled and finished flush in accordance with SSM directions. Cut off high spots and grind smooth as applicable.
- B. Substrate: Take all corrective actions to make substrate sound prior to applying PerfectMembrane all substrate corrective actions required. Substrate shall be clean, dry, and free of debris
- C. Exposed rusted steel must first be treated with IronBack rust converter.
- D. Where there are concerns over vapor out-gassing, prime surface first with SlabTight.
- E. Epoxy, Tile, Urethane, or Polyspartic substrates: Clean and lightly sand, then wiped down with Acetone or De-Natured alcohol prior to applying PerfectPrimer. PVC must first be cleaned, (do NOT sand) then wiped with Isopropyl alcohol.
- F: Protect area or surfaces not designated to receive SSM coatings against any damage or resulting from the system application
- G: Deck expansion joints shall be repaired, sealed with a deck sealant such as those made by BASF or Sonneborn, and honored.

### 3.04 INSTALLATION

- 1 Spray, brush roll apply (use 3/8" roller) a foundation coat of Primer onto an area a little wider than the fabric and approximately 3'-4' long. Apply fabric into this wet area.
- 2: Working from the center out to the edges, use hands, brush or roller to smooth it out, forcing the base coat to come up through the material. Leave no wrinkles or air pockets.
- 3: Apply a second coat on top of the fabric, and roll flat until no white fabric is visible. Adjacent fabric overlaps should be approx. 2-3". For spray applications, use a # 30 tip at 3,000 psi. Apply 2.5 gallons per 100 sq. ft.
4. Apply where needed to use as flashings for transitions, seams, and penetrations etc.

### 3.58 TOP COATINGS

**A:** Once PerfectMembrane (PM) installation is completed, you can Top coat finish it with one of our approved materials compatible manufacturers systems and products. **Specialty Solutions systems including PaintPlus, RubberDecky, (RDPM) and SandRich (SRPM). PM is specified for use and compatible with most epoxies, modified cements and acrylic resin based systems. All these systems must be installed as per the manufacturers' instruction guides.**



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V 2.25 3/22/23 Page 8 of 8

### **3.06 FIELD QUALITY REQUIREMENTS**

1: Verify final film thickness as specified. If film thickness has not been achieved, apply additional coating as needed.

### **3.07 FINAL CLEANING**

- A. Remove temporary protection devices and facilities which were installed during the course of the work.
- B. Clean project site, sweep all work and related areas form debris. Secure area as needed.
- C. Remove debris, surplus materials and trash from project site.
- D. All soiled surfaces shall be cleaned using approved materials and methods.

### **3.08 PROTECTION OF COMPLETED MEMBRANE**

- A. Protect completed membrane from damage by work of other trades. Schedule sequence of work so that traffic over new membrane is minimized. Institute required procedures for protection of completed membrane during installation of work from other trades throughout remainder of construction period. Do not allow traffic of any type on unprotected membrane.
- B. At completion of construction activities of other trades, touch-up and restore damaged or defaced coated surfaces. Correct damage by cleaning, repairing, replacing, and/or recoating to make acceptable to the project architect/designer and/or Specialty Solutions inc.nc. Leave completed installation in an undamaged condition

**End of this section**