SECTION 07 50 00

MEMBRANE ROOFING

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\*\* NOTE TO SPECIFIER \*\* Sherwin-Williams; paints, coatings, and sealants.  
This section is based on the products of Sherwin-Williams, which is located at:101 Prospect Ave.Cleveland, OH 44115Toll Free Tel: 800-4-SHERWIN (474-3794)Tel: 216-566-2000Fax: 216-566-1392Email: [request info (specifications@sherwin.com)](https://arcat.com/rfi?action=email&company=Sherwin-Williams&message=RE%253A%2520Spec%2520Question%2520(07500swi)%253A%2520&coid=35477&spec=07500swi&rep=&fax=216-566-1392)  
Web: <https://www.sherwin-williams.com/full-spectrum-possibilities> | <https://www.uniflexroof.com>   
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From specifying for sustainability to dealing with challenging substrates. our designer and architectural account executives can assist you to find products that match your performance requirements, budget, and deadline. They can assist you with resources on LEED and other sustainable programs and guidelines. Also. they can help you find the right coating, review project submittals. introduce new products and support you with professional resources and training.  
  
Solutions to make specification easy.  
From floors to walls to trim to ceilings. structural steel to masonry to architectural woodwork. Sherwin- Williams has the most innovative products for every commercial or industrial application and substrate. By using the latest technologies, we're able to offer better choices, more options, and never-before possibilities-  
  
 We help you:  
Meet today's specification Challenges.  
Maximize performance.  
Control costs.  
Meet VOC regulations.  
Improve application efficiencies.  
  
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When you specify Sherwin-Williams, your designs ate powered by our exclusive technology for ensuring exceptional color accuracy and consistency in every gallon of paint. Precision is possible thanks to Sherwin-Williams integrated product design, quality manufacturing. nationwide distribution and technical expertise. We manufacture our own base products and colorants, ensuring rigorous quality control and performance.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Silicone roof coating system for asphaltic roofs (Modified bituminous BUR).
    2. No fabric acrylic roof coating system for BUR and granulated modified bitumen.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
    2. Section 03 51 13 - Cementitious Wood Fiber Decks.
    3. Section 03 52 13 - Composite Concrete Roof Insulation.
    4. Section 05 36 00 - Composite Metal Decking.
    5. Section 06 10 00 - Rough Carpentry.
    6. Section 07 62 00 - Sheet Metal Flashing and Trim.
    7. Section 07 70 00 - Roof and Wall Specialties and Accessories.
    8. Section 08 60 00 - Roof Windows and Skylights.
    9. Section 22 30 00 - Plumbing Equipment.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM International (ASTM):
       1. ASTM C1153 - Standard Practice for Location of Wet Insulation in Roofing Systems Using Infrared Imaging.
       2. ASTM D562 - Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer.
       3. ASTM D624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.
       4. ASTM D1644 - Standard Test Methods for Nonvolatile Content of Varnishes.
       5. ASTM D1653 - Standard Test Methods for Water Vapor Transmission of Organic.
       6. ASTM D2370 - Standard Test Method for Tensile Properties of Organic Coatings.
       7. ASTM D2697 - Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings.
       8. ASTM D6694 - Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems.
       9. ASTM D7954 - Standard Practice for Moisture Surveying of Roofing and Waterproofing Systems Using Nondestructive Electrical Impedance Scanners.
       10. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
    2. Florida Building Code (FBC):
       1. FL12895-R3
       2. Miami Dade NOA No.: 15-0825.02 (granulated Mod Bit)
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Prior to Bid Provide to Manufacturer: Project specifications, details, submittals, photographs, inspection reports and existing substrate conditions for review and pre-application warranty approval.
     3. At Time of Bidding: Submit the following:
        1. Certificate or letter from the Manufacturer approving the Installer in good standing for application of the Manufacturer's products and systems.
        2. Cured sample of products to be installed.
        3. Manufacturer's details and approved shop drawings for the coating system.
     4. Product Data:
        1. Product and Material Safety Data Sheets for each product indicated.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.
        5. Sample copy of Manufacturer's warranty to be issued upon successful project completion.
        6. Sample copy of the Installer's warranty.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum 20 years documented experience and be ISO 9001:2008 Certified.
     2. Source Limitations: Provide each type of product from a single manufacturing source or approved by the primary roofing Manufacturer for compatibility to ensure uniformity.
     3. Installer Qualifications:
        1. Represents and warrants it is experienced in and qualified to perform the specified work and provide the necessary equipment, supervision, and trained workforce capable of completing the work in a safe, prompt, diligent, professional, and workmanlike manner in accordance with federal, state, and local laws, rules and regulations, this Specification and good roofing practice.
        2. Thoroughly familiar with codes, regulations and standards governing the work to be performed and provide written proof of required licenses and permits prior to project commencement.
        3. Approved by Manufacturer for application of Manufacturer's products and systems and in good standing at time of the work and coordinate with Manufacturer prior to bidding and commencement of work regarding any Manufacturer's warranty to be issued upon successful completion of the Project.
        4. Inspect project to examine actual job and site conditions and be familiar with local conditions and all things required to complete the work that will have a bearing on its costs and completion.
        5. Ensure a trained foreman is onsite during application of coating system and any related work. Maintain a daily log of application activities and environmental conditions available on-site with copies of specification, TDS, and MSDS. Submit a copy of activity log to Manufacturer upon project completion.
        6. Check wet film thickness during application of coatings to ensure achievement of required coverage rates.
        7. In the event performance or completion of work will be delayed, Installer will notify the Owner, the Owner's Representative and Manufacturer in writing as soon as possible.
        8. Deviations made from the Specifications must be submitted in writing by the Installer and approved in writing by the Specifier, Owner and Manufacturer.
     4. All substrates must be peel tested for adhesion strength and those results provided to Manufacturer prior to application of the coating system.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver products to jobsite in Manufacturer's original unopened and undamaged containers bearing Manufacturer's original labels. Package labels must be clearly visible on pallets. Verify products are within Manufacturer's recommended shelf life.
     2. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     3. Protect from damage due to weather, excessive temperature, and construction operations.
     4. Store products in a dry, well ventilated, weather tight location at temperatures between 50 and 99 degrees F (10 and 37 degrees C).
        1. Do not store at higher temperatures or in direct sunlight.
        2. Protect from freezing or other damage during transit, handling, and storage.
        3. Store and handle in a manner ensuring no contamination.
        4. Keep lids sealed when not in use.
        5. Do not stack pallets more than 2 high.
        6. If these storage conditions are not possible, special consideration in storage must be taken and approved by the manufacturer.
     5. Do not subject existing roof to unnecessary loading of stockpiled products or other materials.
     6. Record batch numbers in daily project activity log. Submit to Manufacturer upon project completion.
     7. Store and dispose of products and materials used on the project in accordance with federal, state, and local requirements for handling and disposal of such products and materials.
  3. PROJECT CONDITIONS
     1. Condition of Existing Substrate:
        1. The Owner, Owner's Representative and Contractor must inspect and determine the condition of the roof system and substrate to be coated.
           1. Determine roof system suitability for the application and performance of the coating system.
        2. Surfaces and substrates to be coated must be properly prepared, clean, dry, structurally sound, and free from any moisture, dirt, contaminants, or any other conditions which may interfere with application and performance of coating system.
        3. Approve condition of roof system and substrate prior to roof coating application.
        4. Wet insulation and deteriorated or damaged decking or other materials must be removed and replaced before application of coating system.
        5. Roof Coating: To have good resistance to ponding water. However, areas of prolonged ponding water may, depending on environmental conditions, require additional inspection and maintenance (including cleaning and re-coating) during the warranty period.
           1. The NRCA recommends that all roofs be designed and built to have positive drainage.
           2. Direct any questions or concerning deck deflection because of ponding water conditions to a competent and properly licensed design professional.
        6. If unusual, unexpected, or concealed conditions are discovered at prior to or during the Work, stop work immediately and notify Owner, Owner's Representative and Manufacturer in writing as soon as possible.
     2. Protection and Coordination by Installer:
        1. Cooperate with Owner to allow for continued use of facilities during the work. Owner will occupy premises during the work.
        2. Take necessary precautions when using roof coatings or other materials around air intakes and air conditioning units, avoid any disturbance, including odors, for building occupants.
           1. Adequately protect or close air intakes and air conditioning during the Work on the roofing system. Prohibit odor intake into building.
        3. If ventilators Exist on Roof: Determine what material is being exhausted onto roof surface. Contact Manufacturer to determine if exhaust materials will interfere with surface preparation, application, adhesion, or other performance of coating system.
        4. Protect unrelated work or adjacent areas from overspray and spillage.
        5. Coordinate scheduling with Owner to relocate or protect vehicles, building occupants, building contents and unrelated work from damage.
        6. Site clean-up during and after work completion to be completed to Owner's satisfaction.
  4. WEATHER AND SURFACE TEMPERATURE
     1. Proceed with roofing work when existing and forecasted weather conditions and surface temperatures permit work to be performed in accordance with Manufacturer's recommendations and good roofing practice, including:
        1. Ambient Air Temperature: 40 to 120 degrees F (4 to 49 degrees C) during entire application and curing process.
        2. Surface Temperatures: Between 40 and 150 degrees F (4 to 65 degrees C) during application.
           1. If surface temperatures exceed 150 degrees F (65 degrees C) during application, wait for roof to cool before proceeding.
        3. Never apply coating to a wet or damp roof surface.
        4. Roof Surface: Must be free from moisture with no precipitation in forecast until coating is dry. Do not apply coating if weather does not permit 4 to 6 hours of dry time prior to precipitation. Low humidity, low temperatures, cloud cover and calm air will slow dry time.
        5. Windy Conditions: Extra precaution is needed conditions.
           1. Never spray material when excessive wind conditions exist.
           2. Monitor wind condition to prevent over-spray. If winds become excessive, spraying should stop.
  5. PRE-APPLICATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees to include Architect, Contractor, Owner, Manufacturer, and trades involved.
     2. Meeting Agenda: Include schedule, responsibilities, critical path items and approvals.
     3. Contractor to Record Conference Discussions: Capture decisions, agreements, and open issues, and furnish transcripts of recorded discussions to each attending party.
        1. Primary Meeting Purpose: Review methods and procedures related to roofing work and any special Owner requirements.
     4. All Parties will Review the Following:
        1. Representative areas of roofing substrate.
           1. Discuss substrate conditions, penetrations, and other work to be completed prior to coating system application.
        2. Roofing system requirements, specifications, detail drawings, Contract Documents and required submittals, both completed and in progress.
        3. Construction schedule.
           1. Finalize construction schedule related to roofing work.
           2. Verify availability of materials, Contractor's personnel, equipment, and resources required for consistent progress and to avoid delays.
        4. Contractor's inspections, adhesion, and non-destructive testing.
        5. Forecasted weather conditions expected.
           1. Establish procedures for coping with unfavorable conditions, including possible temporary roofing work.
  6. WARRANTY
     1. Project warranties beyond those documented on Product Data Sheets require Manufacturer approval prior to job commencement.
        1. Warranties for the project must be submitted and accepted by Owner at time of contract award.
        2. Contact Manufacturer for requirements and associated costs or fees associated with warranty issuance.
        3. Recommendations and requirements are subject to change from project to project based on existing conditions.
     2. Manufacturer may issue either of the following warranties to the Building Owner as may be agreed to at time of contract award.
        1. Warranty: Material only.
        2. Warranty: Labor and material only.
        3. Warranties issued are for coating applications only and provide no coverage for the existing roofing system, including substrate or structural deck.
        4. Any presence of Manufacturer personnel on the project site does not provide any additional coverage beyond that stated in the applicable warranty.
     3. The Contractor may provide the Owner with a workmanship warranty as may be agreed to by the Contractor at time of contract award.
  7. REGULATORY AND SAFETY
     1. Perform work in a safe, professional, timely and workmanlike manner and in accordance with federal, state, and local laws, rules and regulations related to the work to be performed, the Specifications and good roofing practice.
     2. Be thoroughly familiar with codes, regulations and standards governing Work to be performed. Provide written proof of required licenses and permits prior to project commencement.
     3. Establish and enforce a safety program for its work and employees which meets or exceeds federal, state, and local laws, rules, and regulations, including proper fall protection and other applicable requirements of the Occupational Safety and Health Act of 1970 (OSHA), and other requirements which may be necessary for the safety of its employees, Owner, and the public.

1. PRODUCTS
   1. MANUFACTURERS

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article not required.

* 1. SILICONE ROOF COATING SYSTEM FOR ASPHALTIC ROOFS; MODIFIED BITUMEN/SMOOTH BUR
     1. General: Products other than those described in Part 2 may be submitted for review and acceptance by Manufacturer. Manufacturer's review shall be for compatibility purposes only with Manufacturer's products. The specifications and application instructions for products not supplied by Manufacturer must be reviewed by the Owner and/or Owner's Representative for final approval and use on the project. Manufacturer will not provide any warranty coverage for products other than those supplied by the specified Manufacturer.
     2. Basis of Design: Silicone Roof Coating as supplied by Uniflex Fluid Applied Roofing Systems. Rubberized Silicone White Roof Coating ideal for ponding water. Low Temperature performance; may be applied in temperatures as low as 33 degrees F (0.5 degrees C) and rising.

\*\* NOTE TO SPECIFIER \*\* Delete product option not required.

* + - 1. Product: Uniflex 44-300 White Silicone.
         1. Sealant: Uniflex Silicone Rubberized Roof and Flashing Sealant 44-900 White.
      2. Product: Uniflex 44-320 Gray Silicone.
         1. Sealant: Uniflex OneFlash Sealant 51-920 Gray.
      3. Performance Characteristics:
         1. Elongation: 315 percent.
         2. Tensile Strength: 250 psi (1724 kPa).
         3. Tear Resistance (ASTM D624): 25 lbs/linear ft (37.2 kPa).
         4. Permeance (ASTM E96 Procedure BW): 7.2 US perms.
         5. Solar Reflectance Index: 110.
         6. Reflectivity: 0.90.
         7. Thermal Emissivity: 0.90.
      4. Product Characteristics:
         1. Weight per Gallon: 11.05 lbs, plus or minus 0.5 lbs (5 kg plus or minus .23 kg)
         2. Solid by Weight: 95 percent.
         3. Solid by Volume: 95 percent.
         4. Viscosity per ASTM D562: 7,098 cps.
         5. Dry Film Thickness at 5 Gallons 250 sq ft (23.23 sq m): 30 mils (0.762 mm).
         6. Dry Time: Temperature, humidity, and film thickness dependent.

Rain Safe: 60 minutes

Exposure: 4 to 6 hours.

Between coats: 6 hours minimum.

Full cure at 70 degrees F, 50 percent relative humidity: 72 hours.

* + - * 1. VOC: Less than 50 g/L
        2. pH at 77 degrees F (21 degrees C): 8.0
        3. Flash Point: Greater than 247 degrees F (119 degrees C).
        4. Clean Up: Virgin Mineral Spirits or Naptha,
    1. Additional Materials:
       1. Polyester Fabric Reinforcement Flashing: Uniflex No. 20-3850, 20-385A, B, and C.
       2. Roof Brushes:
          1. Handheld Roof Brush (20-504): 4 inches (102 mm).
          2. Roof Brush Head (20-510): 10 inches (254 mm).
          3. Roof brush handle treaded (50-560): 60 inches (1524 mm).

\*\* NOTE TO SPECIFIER \*\* Delete walkways options if not required.

* + - 1. Walkways: No. 11 - C93 granules or like granules (0.84 to 2.0 minimum size).
  1. NO FABRIC ACRYLIC ROOF COATING SYSTEM GUIDE SPECIFICATION FOR BUR & GRANULATED MODIFIED BITUMEN
     1. General: Products other than those described in Part 2 may be submitted for review and acceptance by Manufacturer. Manufacturer's review shall be for compatibility purposes only with Manufacturer's products. The specifications and application instructions for products not supplied by Manufacturer must be reviewed by the Owner and/or Owner's Representative for final approval and use on the project. Manufacturer will not provide any warranty coverage for products other than those supplied by the specified Manufacturer.
     2. Basis of Design: No fabric acrylic roof coating system for BUR and granulated modified bitumen as supplied by Uniflex Fluid Applied Roofing Systems. A finish coat formulated using a 100 percent acrylic polymer that provides weathering and reflectivity properties. Formulated to resist cracking and peeling. Excellent waterproofing capabilities. The bright white finish reduces surface temperatures thereby minimizing thermal expansion and contraction. Under-the-roof temperatures are also reduced, lowering cooling costs.

\*\* NOTE TO SPECIFIER \*\* Delete product option not required.

* + - 1. Product: Uniflex 41-300 White Acrylic.
      2. Product: Uniflex 41-520 MB Base Coat - Gray.
      3. Performance Characteristics:
         1. Elongation/Tensile at 73 degrees F (22.8 degrees C).

Initial Elongation per ASTM D2370: 180 percent.

Tensile Strength per ASTM D2370: 240 psi (1655 kPa)

1000 Hrs. Xenon Arc (ASTM D 2370) 167 percent.

* + - * 1. Permeance (ASTM D1653) 4 US perms.
      1. Product Characteristics:
         1. Vehicle Base: 100 percent Acrylic Resin.
         2. Weight per Gallon: 11.8 lbs.
         3. Solid by Weight per ASTM D1644 67 plus 2 percent.
         4. Solid by Volume per ASTM D2697 52 plus 2 percent.
         5. Viscosity at 73 degrees F per ASTM D562: 110 plus 5 ku.
         6. Dry Film Thickness at 1 gal per 100 sq ft (9.3 sq m) less surface absorption: 8.4 mils (0.213 mm).
         7. Dry Time: Temperature, humidity, and film thickness dependent.

Exposure: 4 to 6 hours.

Between Coats: 24 hours minimum.

Full Cure: 7 days.

* + - * 1. VOC: less than or equal to 50 g/L
        2. pH: 8.5 plus 0.5.
        3. Specific Gravity: 1.42.
        4. Flash Point: None.
        5. Solvent: Water.
        6. Clean Up: Warm, soapy water.
    1. Sealant: Uniflex OneFlash Sealant 51-920 Gray.
    2. Additional Materials:
       1. Uniflex Polyester Fabric for flashing reinforcement 20-3850, 20-385A, B, C.
       2. Roof Brushes: Required when embedding fabric.
          1. Handheld Roof Brush (20-504): 4 inches (102 mm).
          2. Roof Brush Head (20-510): 10 inches (254 mm).
          3. Roof brush handle treaded (50-560): 60 inches (1524 mm).

\*\* NOTE TO SPECIFIER \*\* Delete walkways options if not required.

* + - 1. Walkways: No. 11 - C93 granules or like granules (0.84 to 2.0 minimum size).

1. EXECUTION
   1. EXAMINATION INSPECTION AND TESTING
      1. Inspect roof system areas for moisture in accordance with guidelines of the Standard Practices for Moisture Surveying of Roofing and Waterproofing Systems by a person qualified and certified to provide proper interpretation of non-destructive moisture survey data. Requires knowledge of infrared theory, moisture migration, heat transfer, environmental effects, and roof construction as they apply to roof moisture analysis.
         1. Provide Moisture Survey analysis reports in accordance with the following industry standards, ASTM C1153, D7954, D7954M, - 15A and TAS 126-95 guidelines
         2. Gravel surfaced BUR roofs require a mandatory Moisture Survey Analysis report to be submitted if a material and labor warranty is being requested.
         3. Evidence of Approved and Calibrated Moisture detection equip must be provided upon request by Uniflex.
         4. FLIR Level III certification is required for all Infrared Thermography and submittals must be provided upon request by Uniflex.
         5. Field data collected from non-destructive moisture testing is relative and must be quantified by core cuts. Additional core cut requirements may be requested by manufacturer.
         6. Some Moisture Survey practices are not appropriate for all combinations of materials used in roofing and waterproofing systems.
         7. Refer to the Uniflex Technical Memo - RE: Moisture Survey Requirements.
      2. Based on inspection and testing, make a roof plan to show all areas of water intrusion, ponding water, wet insulation, and any deteriorated or damaged decking or other materials.
      3. Verify a minimum roof slope of 1/4 inch per foot and that roof drains are clean and in good working order.
      4. Prior to application of coating system, perform adhesion testing over substrates including previously coated and non-coated roof membranes.
         1. Follow industry approved method for field adhesion test methods. The minimum test patch size is to be one square foot.
         2. Allow roof coating to cure for a minimum of 72 hours prior to conducting peel test.
         3. Coating adhesion Liquid Applied Roofing Section 07 50 00 - Membrane Roofing 6 Rev. 1/2018 must achieve a minimum of 2 pounds per lineal inch.
            1. Results less than 2 pounds per lineal inch shall be reported to Manufacturer and retested using primer.
         4. Perform adhesion testing in areas of existing roofing membrane indicating worn substrates, any change in substrate, areas that show evidence of ponding water conditions or previously coated areas.
         5. Record and submit adhesion test results to Manufacturer for additional evaluation.
      5. Adhesion Test:
         1. Complete over all substrates including previously coated and non-coated roofs prior to installation of roof coating.
         2. Contact Roof Coating Manufacturer for required warranty compliance procedures.
         3. Adhesion tests on previously coated substrates are required for all areas including, but not limited to the following:
            1. Field of existing metal roofing:

Minimum number of tests: Two per 10,000 sq. ft.

Areas of existing metal roofing indicating worn substrates require additional testing.

* + - * 1. Any change in existing metal roofing substrate.
        2. Existing metal roofing installed in varying phases.
        3. Shaded areas.
        4. Areas indicating ponding water.
        5. Previously coated areas.

Where adhesion is less than desired, contact Roof Coating Manufacturer's for additional guidance.

* + 1. If unusual, unexpected, or concealed conditions are discovered any time prior to or during the work, stop work immediately and notify the Owner, Owner's Representative and Manufacturer in writing as soon as possible.
  1. PREPARATION
     1. After inspection and testing, make necessary repairs to roofing system. Do not proceed with application of coating system until repairs have been made and unsatisfactory conditions have been corrected, including repairs which may be recommended by Manufacturer or any design professional. Preparation of roof substrate is the responsibility of the Contractor.
     2. Remove and replace any wet insulation and deteriorated or damaged decking or other materials with like kind or better-quality materials.
     3. Prior to power washing, repair splits, open seams, tears, cuts and blisters in membrane and flashings, and other conditions affecting water tightness of roof. Membrane must be made sound and watertight. Make repairs in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
     4. Any mechanical equipment and roof penetrations including stacks, vents and pipes must be securely installed, properly sealed, and made completely watertight. Remove abandoned pipes and vent stacks. Fill in holes in and roof with like decking, insulation, and membrane, in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
     5. Properly seal and waterproof roof curbs and parapet walls in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
     6. Pitch Pans: Remove 1 inch of existing pitch pan material, fill and trowel to create a slight slope with Uniflex 58- 360 Pitch Pan Roofing Sealant.
     7. Secure and seal loose metal in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
     8. Skylights must be sealed and made watertight in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required.

* + 1. Field Seams: Not required for BUR.
       1. Install 1 layer of roof coating 24 wet mils thick extending 2 inches on each side of existing roof membrane seam. Back roll coating diagonally across seam to provide a continuous watertight seal at seam.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Field Seams
       1. Seal all field seams by installing one (1) layer of roof base coating at sixteen (16) wet mils extending four (4) inches on each side of existing roof membrane seam. Center six (6) inch wide strip of Uniflex stitch- bonded polyester fabric over existing roof membrane seam and fully embed fabric into roof coating ensuring three (3) inches of fabric on each side of existing roof membrane seam. Brush fabric for proper adhesion and removal of all voids. Apply second layer or roof base coating at thirty-two (32) wet mils extending a minimum eight (8) inches on each side of existing roof membrane seam ensuring fabric is fully coated and has a smooth and continuous watertight finish.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required.

* + 1. Stacks and Other Penetrations:
       1. Uniflex 44-900 or 51-920 Sealant: Using a stiff bristled brush or sealant knife apply sealant at one- sixteenth (1/16) inch thick (60 wet mils) extending three (3) inches on horizontal and three (3) inches up vertical surface ensuring a smooth and continuous watertight finish.
       2. Inspect all sealants at counter flashings and replace as needed.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Curbs, Stacks, and other penetrations
       1. Using a stiff bristled brush or sealant knife apply OneFlash sealant at one-sixteenth (1/16) inch thick (60 wet mils) extending three (3) inches on horizontal and three (3) inches up vertical surface ensuring a smooth and continuous watertight finish.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required.

* + 1. Curb and Wall seams and other termination points:"
       1. Uniflex 44-900 or 51-920 Sealant: Using a stiff bristled brush or sealant knife apply sealant at one- sixteenth (1/16) inch thick (60 wet mils) install (1) layer of Uniflex roof sealant extending two (2) inches on each side of existing roof membrane seam ensuring a smooth and continuous watertight finish.
       2. Inspect all sealants at counter flashings and replace as needed.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Parapet Walls and other termination points
       1. Seal all existing base flashings or metal edge flashings by installing one (1) layer of roof coating at Sixteen
       2. (16) wet mils extending eight (8) inches on each side of existing roof membrane seam. Center twelve (12) inch wide strip of Uniflex stitch-bonded polyester fabric over existing roof membrane seam and fully embed fabric into roof coating ensuring six (6) inches of fabric on each side of existing roof membrane seam. Brush fabric for proper adhesion and removal of all voids. Apply second layer of roof coating at thirty-two (32) wet mils extending a minimum eight (8) inches on each side of existing roof membrane seam ensuring fabric is fully coated and has a smooth and continuous watertight finish.
       3. Inspect all sealants at counter flashings and replace as needed.
    2. Wood Blocking:
       1. Contractor shall inspect and replace any deteriorated or damaged wood blocking or sleepers in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
    3. Expansion Joint and Control Joints:
       1. Use curb flashing repair methods on the joint curbs only. Do not coat expansion or control joints with curb flashing materials. If existing expansion joint materials are repairable use materials and methods recommended by the original manufacturer of the joint. Replace the joint if deteriorated with a new expansion joint system, which will counter flash the UNIFLEX base flashing. Please contact manufacturer for full details and requirements for warranted jobs. Recommendations and requirements are subject to change.
    4. Surface Cleaning
       1. Contractor shall first remove any dirt or debris from the roof by using a broom or air broomer.
       2. After brooming and prior to power washing, Contractor shall re-inspect the roof surface and flashings for any splits, open seams, tears, cuts and blisters in membrane and any other conditions affecting the water tightness of the roof. The membrane shall be repaired so water is not injected into the membrane during the cleaning process.
       3. The roof shall be power washed using a power washer with greater than 2,000psi. The Contractor shall take caution not to inject water into the roofing substrate.
       4. Any areas of algae, mildew or fungus on the roof membrane or the existing coating shall be treated with a tri-sodium phosphate (TSP) or equivalent non-filming detergent and water solution.
       5. Clear water rinse until all cleaning residue is removed.
       6. After cleaning and rinsing the roof, Contractor should ensure that no dirt, debris, or contaminants are present that may interfere with proper adhesion of the coating system.
       7. Contractor shall allow 24-48 hours for complete drying before application of the coating system.
       8. All substrates must be dry and in accordance with Roof Coating Manufacturer's published literature prior to installation of roof coating. It is the responsibility of the building owner or their representative to ensure substrate is dry and in acceptable condition for the application of a roof coating.
  1. WEATHER CONDITIONS & TEMPERATURE REQUIREMENTS
     1. Contractor shall proceed with roofing work only when the existing and forecasted weather conditions and surface temperatures will permit work to be performed in accordance with Manufacturer's recommendations and good roofing practice, including:
        1. Ambient air temperature must be 40 degreesF and rising, but not above 120 degreesF during the entire application and curing process.
        2. Surface temperatures must be between 40 degreesF and 150 degreesF during application. If surface temperatures exceed 150 degreesF during application, wait for roof to cool.
        3. Never apply coating to a wet or damp surface. Roof surface must be free from any moisture with no precipitation in the forecast until coating is dry. Do not apply coating if weather does not permit 4-6 hours of dry time prior to precipitation. Low humidity, low temperatures, cloud cover and calm air will slow the dry time.
        4. Extra precaution is needed when applying material in windy conditions. Never spray material when excessive wind conditions exist. Contractor should monitor wind condition to prevent over-spray. If winds become excessive, spraying should stop.
  2. INSTALLATION COATING SYSTEM APPLICATION
     1. General:
        1. Surface preparation is critical prior to application of the coating system. Contractor shall ensure that all surfaces and substrates which are to be coated have been properly prepared and are clean, dry, structurally sound, and free from any moisture, dirt, contaminants, or any other conditions which may interfere with the application and performance of the coating system.
     2. Protection and Start-Up Procedures:
        1. Contractor shall only apply coating when the existing or forecasted weather conditions and surface temperatures will permit work to be performed as described in Section 1.8.
        2. Owner shall be notified of start times so that fresh air intakes may be closed, sealed off or adequately protected and HVAC units shut down.
        3. If Contractor is spray applying the coating system, Contractor shall post notices a minimum of 48 hours around building and parking lots prior to any spraying.
        4. Contractor shall protect unrelated work and adjacent surfaces from overspray or spillage by using masking tape, plastic/paper sheets, stretch wrap, tarps or plywood, or some other material.
        5. Contractor shall remove drain screens and seal the drainpipe to prevent plugging of drain during the coating operation and shall unplug drains and reinstall screens after spray operation has been completed.
        6. Contractor shall follow all of Manufacturer's mixing instructions for the products prior to application.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required.

* + 1. Application Methods:
       1. Roller: For best results when using a roller, pour coating onto substrate and then spread using squeegee. Back roll using a 3/4" roller. Uniflex roof brushes should be used when embedding fabric.
       2. Spray: Airless spray equipment with a recommended minimum air pressure of 5,000 psi at the tip and a tip size of .031 - .035 (e.g. .635 tip) is recommended for best results.
       3. Contractor shall frequently verify correct mil thickness by the use of a standard wet mil gauge during application of the coating.
       4. During application of the coating, Contractor will look for and correct any pinholes, blisters or conditions which may affect the performance of the roof coating.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Application Methods:
       1. Roller: Minimum 3/4 inch (76 mm) nap roller recommended. Uniflex roof brushes shall be used when embedding fabric.
       2. Spray: Airless spray equipment with a recommended minimum air pressure of 2800 psi at the tip and a tip size of .031-.035 (e.g..635 tip) is recommended for best results.
       3. Contractor shall frequently verify correct mil thickness by the use of a standard wet mil gauge during application of the coating.
       4. During application of the coating, Contractor will look for and correct any pinholes, blisters or conditions which may affect the performance of the roof coating.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required

* + 1. Application of Roof Coating: May be applied in one or multiple coats as conditions require- Preferred application spray applied- Roller application may require multiple coats on 15-20-year system applications.
       1. Smooth BUR/Smooth Modified
          1. Ten (10) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at two (2.0) gallons per square Thirty-two (32) wet mils; Thirty (30) mils DFT.

* + - * 1. Fifteen (15) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at two and a half (2.5) gallons per square Forty (40) wet mils; Thirty-seven (37) mils DFT.

* + - * 1. Twenty (20) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at three (3.0) gallons per square Forty-eight (48) wet mils; Forty-four (44) mils DFT.

* + - 1. Granular Modified
         1. Ten (10) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at two (2.5) gallons per square Forty (40) wet mils; Thirty-seven (37) mils DFT.

* + - * 1. Fifteen (15) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at three (3.0) gallons per square Forty-eight (48) wet mils; Forty-four (40) mils DFT.

* + - * 1. Twenty (20) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at three and a half (3.5) gallons per square Fifty-six (56) wet mils; Fifty-two (52) mils DFT.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Application of Roof Coating:
       1. Apply MB Base Coat - Gray (41-510) at a rate of 1.5 gal/100 sq. ft.
       2. Apply Finish Coat of UNIFLEX Premium Elastomeric (41-300):
          1. Ten (10) year UNIGUARD Warranty:

Apply one (1) layer of primary roof coating at one and a half (1.5) gallons per square Twenty-four (24) wet mils; Twelve (12) mils DFT.

* + 1. Walkways: (optional)
       1. Prior to walkway surfacing allow for roof to cure for a minimum of 24hrs.
       2. Apply additional roof coating in a contrasting color at traffic areas.
       3. Apply additional roof coating at a minimum of one (1) gallon per square; Sixteen (16) wet mils.
       4. Apply #11 - C93 granules or like granules (.84 to 2.0 minimum in size) roof granules uniformly into wet roof coating at a rate of 25 pounds per 100 square feet. (Note: if larger granules are required, contact Uniflex Technical Department)
       5. Allow roof coating to dry.
       6. Remove loose particles to avoid clogging drains.
    2. Traffic areas: Cured coating can be slippery. Limit pedestrian traffic to designated walkways.

\*\* NOTE TO SPECIFIER \*\* For silicone system. Delete if not required.

* + 1. Repairs: In the event that the coating is damaged or punctured, repairs are to be performed as follows:
       1. Install one (1) coat of Uniflex44 Silicone roof coating at (as required to meet spec requirements) extending four (4) inches on each side of repair area.

\*\* NOTE TO SPECIFIER \*\* For acrylic systems. Delete if not required.

* + 1. Repairs: In the event that the coating is damaged or punctured, repairs are to be performed as follows:
       1. Install one (1) coat of Uniflex acrylic roof coating at Sixteen (16) wet mils extending four (4) inches on each side of repair area.
       2. Center six (6) inch wide strip of stitch-bonded polyester fabric over existing roof membrane seam and fully embed fabric into roof coating ensuring three (3) inches of fabric on each side of existing roof membrane seam. Brush fabric for proper adhesion and removal of all voids.
       3. Apply second coat of Uniflex acrylic roof coating at thirty-two (32) wet mils extending a minimum four (4) inches on each side of existing roof membrane seam ensuring fabric is fully coated and has a smooth and continuous watertight finish.
  1. FIELD QUALITY CONTROL
     1. Limit traffic on coated surfaces for a minimum of two (2) days.
     2. Contractor shall take photographs of representative roof areas, including detail work, before work commences, after the surface has been properly prepared, after all flashing and detail work has been performed, and after application of the coating system. Photographs shall be included in final warranty request.
     3. Final Observation and Verification:
        1. Contractor shall contact Uniflex for warranty issuance requirements and to schedule the final inspection.
        2. Prior to demobilization from the site, a final inspection of the roof coating system shall be carried out by the Owner's Representative, Contractor, and Uniflex Field Technical Representative. Inspection by Uniflex is required for issuance of the final project warranty. Any inspection by Uniflex is for Uniflex warranty purposes only and shall not constitute acceptance of or responsibility for any improper workmanship by Contractor.
        3. Any defects and non-compliance with the Specifications, Product Data Sheets or recommendations of Uniflex shall be itemized in a punch list. These items must be corrected by the Contractor to the satisfaction of the Owner and Uniflex prior to demobilization. Failure to satisfactorily complete punch list items will result in non-issuance of the project warranty.
        4. Any areas of insufficient coating thickness will require recoating by Contractor.
        5. The roof coating system must be fully adhered to the roof substrate. Any voids left under the system must be corrected.
        6. All work for Uniflex warranty must be completed using Uniflex materials. Material invoices must be submitted to Uniflex to verify products installed.
        7. To maintain warranty eligibility and coverage, Owner must follow all inspection and maintenance requirements described in the Uniflex Owner's Packet.
  2. JOB SITE CLEAN UP
     1. Remove masking and protection.
     2. Notify Owner project is complete, so HVAC vents can be opened, and units restarted.
     3. Remove all roofing related trash and debris from jobsite and dispose of all such materials in accordance with all federal, state and local requirements for the proper handling and disposal of such materials.
  3. DISCLAIMER
     1. Uniflex does not practice or provide any architecture or engineering services. If an Owner has a need for architectural or engineering services in relation to the project, the Owner should obtain the services of a competent and properly licensed architect or structural engineer. Neither Uniflex nor its employees offer any opinion or make any representation or warranty, and expressly disclaims any opinion, representation or warranty, on the strength or soundness of the structure, including the roof deck. Any inspections of the roofing system by Uniflex or its employees are for suitability of the substrate for roof coating application and for warranty issuance purposes only.

END OF SECTION