

## SECTION 07500

### UNIFLEX SILICONE ROOF COATING SYSTEM GUIDE SPECIFICATION FOR METAL RESTORATION

#### PART 1 – GENERAL

##### 1.1 DESCRIPTION

- A. Scope of work shall include all materials, labor, equipment and supervision necessary to install a silicone roof coating system as outlined in this Specification. All work shall be performed by properly trained Contractor personnel in a safe, professional, timely and workmanlike manner and in accordance with all federal, state and local laws, rules and regulations, this Specification and good roofing practice.
- B. Restoration of existing Metal Roof Membrane using high solids, silicone roof coating. This Specification is suitable to protect, restore and extend the service life of previously coated and non-coated metal roofs.
- C. Any instructions on the Manufacturer's Product Data Sheets are to be considered part of these Specifications and should be followed in any performance of the work.
- D. Additional details and specific areas of repair may be selected, modified or added as necessary.

##### 1.2 RELATED WORK

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and other Division 01 Specifications, apply to this section.
- B. Contractor shall review all sections of the project specifications to determine items of work that may interface with the application of the roof coating system. Compliance with applicable building codes shall be assured by the specifier or engineer, while coordination and execution of related sections shall be the responsibility of the Contractor.

##### 1.3 REFERENCES

- A. Florida Building Code #FL12895-R3
- B. UL, LLC – QUA9625; File No. R12209
- C. Meets/Exceeds ASTM D 6694

##### 1.4 REVIEW / SUBMITTALS

- A. Prior to bid, all project specifications, details, submittals, photographs, inspection reports and existing substrate conditions shall be provided to Manufacturer for review and pre-application warranty approval.
- B. At the time of bidding, the Contractor shall submit to the Owner the following:
  - 1. A certificate or letter from the Manufacturer approving the Contractor in good standing for application of the Manufacturer's products and systems at the time of the work.
  - 2. Provide cured sample of products to be installed.
  - 3. The Manufacturer's standard details and approved shop drawings for the coating system.
  - 4. Product and Material Safety Data Sheets for each product indicated in this Specification.
  - 5. Sample copy of Manufacturer's warranty to be issued upon successful completion of the project.
  - 6. Sample copy of the Contractor's warranty.

##### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall have a minimum of 20 years experience manufacturing roof coatings and be ISO 9001:2008 Certified.

- B. Products listed herein shall be provided by a single manufacturer or approved by the primary roofing Manufacturer for compatibility.
- C. Contractor represents and warrants that it is experienced in and qualified to perform the work described herein and can provide the necessary equipment, supervision, and trained workforce capable of completing the work in a safe, prompt, diligent, professional and workmanlike manner and in accordance with all federal, state and local laws, rules and regulations, this Specification and good roofing practice.
- D. Contractor shall be thoroughly familiar with all codes, regulations and standards governing the work to be performed and shall provide written proof of all required licenses and permits prior to project commencement.
- E. Contractor shall be approved by Manufacturer for application of Manufacturer's products and systems and in good standing at the time of the work and shall coordinate with Manufacturer prior to bidding and commencement of work regarding any Manufacturer's warranty to be issued upon successful completion of the project.
- F. Contractor shall inspect the project to examine the actual job and site conditions and must be familiar with local conditions and all things required to complete the work that will have a bearing on its costs and completion.
- G. All substrates must be peel tested for adhesion strength and those results provided to Manufacturer prior to application of the coating system.
- H. Contractor is responsible for ensuring a trained foreman is onsite during the application of the coating system and any related work. A daily log of application activities and environmental conditions shall be maintained and available on-site with copies of specification, TDS, and MSDS. A copy of the activity log shall be submitted to Manufacturer upon completion of project.
- I. Contractor shall check wet film thickness during application of the coatings to ensure achievement of required coverage rates.
- J. In the event Contractor finds that performance or completion of the work will be delayed for any reason, Contractor shall notify the Owner, the Owner's Representative and Manufacturer in writing as soon as possible.
- K. There shall be no deviations made from the Specifications unless submitted in writing by the Contractor and approved in writing by the Specifier, Owner and Manufacturer.

#### 1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Products shall be delivered 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.
- B. Store all products in a dry, well ventilated, weather tight location at temperatures between 50° F and 99° F. Do not store products at higher temperatures or in direct sunlight. Protect all products from freezing or other damage during transit, handling and storage. Store and handle products in a manner that will ensure there is no possibility of contamination. Keep lids tightly sealed when not in use. Do not stack pallets more than two (2) high. If these storage conditions are not possible, special consideration in storage must be taken.
- C. Do not subject existing roof to unnecessary loading of stockpiled products or other materials.
- D. Record batch numbers in daily project activity log. Submit to Manufacturer upon project completion.
- E. Store and dispose of all products and materials used on the project in accordance with all federal, state and local requirements for the proper handling and disposal of such products and materials.

#### 1.7 PROJECT CONDITIONS

- A. Condition of Existing Substrate:

1. The Owner, Owner's Representative and Contractor shall thoroughly inspect and determine the condition of the roof system and substrate to be coated, and the suitability of the roof system for the application and performance of the coating system.
2. All surfaces and substrates which are 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 the application and performance of the coating system. Contractor shall approve the condition of the roof system and substrate prior to application of the roof coating system.
3. Wet insulation and any deteriorated or damaged decking or other materials must be removed and replaced before application of the coating system.
4. The roof coating shall 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. The NRCA recommends that all roofs be designed and built to have positive drainage. Any questions or concerns about deck deflection as a result of ponding water conditions shall be directed to a competent and properly licensed design professional.
5. If any unusual, unexpected or concealed conditions are discovered at any time prior to or during the work, the Contractor shall stop work immediately and notify the Owner, Owner's Representative and Manufacturer in writing as soon as possible.

**B. Protection and Coordination:**

1. Owner will occupy the premises during the work. Contractor will cooperate with the Owner to allow for the continued use of the facilities during the work.
2. Contractor shall take all necessary precautions when using roof coatings or other materials around air intakes and air conditioning units to avoid any disturbance, including odors, for the Owner and building occupants. All air intakes and air conditioning shall be adequately protected or closed during the course of the work on the roofing system to prohibit odor intake into the building.
3. If ventilators exist on the roof, the Contractor shall determine what material is being exhausted onto the roof surface. Contractor shall contact the Manufacturer to determine if the exhaust materials will interfere with surface preparation, application, adhesion or other performance of the coating system.
4. Contractor shall take all necessary measures to protect unrelated work or adjacent areas from overspray and spillage.
5. Contractor shall coordinate scheduling with the Owner to relocate or protect vehicles, building occupants, building contents and unrelated work from damage.
6. Site cleanup during and after completion of the work shall be completed to Owner's reasonable satisfaction.

**1.8 WEATHER AND SURFACE TEMPERATURE**

- A. 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°F and rising, but not above 120°F during the entire application and curing process.
  2. Surface temperatures must be between 40°F and 150°F during application. If surface temperatures exceed 150°F 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.

**1.9 PRE-APPLICATION CONFERENCE**

- A. Prior to scheduled commencement of the coating application and any related work, Contractor shall conduct a meeting on the roof with the Architect, Owner, Manufacturer and any other persons directly involved with the performance of the work. The Contractor shall record conference discussions to include decisions, agreements, and open issues and furnish copies of recorded discussions to each attending party. The primary purpose of the meeting is to review methods and procedures related to the roofing work and any

special Owner requirements.

- B. All parties shall view representative areas of the roofing substrate and discuss conditions of the substrate, penetrations and any other work to be completed prior to application of the coating system.
- C. Review roofing system requirements, specifications, detail drawings, Contract Documents and required submittals, both completed and in progress.
- D. Review and finalize the construction schedule related to roofing work, and verify availability of materials, Contractor's personnel, equipment and facilities needed to consistently make progress and avoid delays.
- E. Review results from Contractor's inspections, adhesion and non-destructive testing.
- F. Review forecasted weather conditions expected. Establish procedures for coping with unfavorable conditions, including the possibility of temporary roofing work.

#### 1.10 WARRANTY

- A. Project warranties beyond those found on Product Data Sheets require Manufacturer approval prior to job commencement. Any warranties for the project must be submitted and accepted by the Owner at the time of contract award. Please contact Manufacturer for any requirements and associated costs or fees which may be associated with warranty issuance. Recommendations and requirements are subject to change from project to project based on existing conditions.
- B. Manufacturer may issue to the Building Owner either (a) Material Only Warranty or (b) Labor and Material Warranty, as may be agreed to at time of contract award. Any warranties issued shall be for the coating application only and shall not provide coverage for the existing roofing system, including the substrate or structural deck. Any presence by Manufacturer personnel on the project does not provide any additional coverage beyond that stated in the applicable warranty.
- C. The Contractor may provide the Owner with a workmanship warranty as may be agreed to by the Contractor at time of contract award.

#### 1.11 REGULATORY AND SAFETY

- A. Contractor will perform all work in a safe, professional, timely and workmanlike manner and in accordance with all federal, state and local laws, rules and regulations related to the work to be performed hereunder, the Specifications and good roofing practice.
- B. Contractor shall be thoroughly familiar with all codes, regulations and standards governing the work to be performed and shall provide written proof of all required licenses and permits prior to project commencement.
- C. Contractor shall establish and enforce a safety program for its work and employees which meets or exceeds all federal, state and local laws, rules and regulations, including proper fall protection and all other applicable requirements of the Occupational Safety and Health Act of 1970 (OSHA), and all other requirements which may be necessary for the safety of its employees, Owner and the public.

PART 2 – PRODUCTS

2.1 GENERAL

- A. 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.

2.2 ACCEPTABLE MANUFACTURERS

- A. Uniflex Fluid Applied Roofing Systems, 101 W. Prospect Avenue, Cleveland, Ohio 44115
- B. Contact the Uniflex Technical Department at [uniflex.technical@sherwin.com](mailto:uniflex.technical@sherwin.com) with any questions and for a complete list of approved products.

2.3 COMPONENTS

- A. Silicone Roof Coating:
  - 1. Uniflex® 44-300 WHITE SILICONE
  - 2. Uniflex® 44-320 GRAY SILICONE (Optional)
  - 3. Product Characteristics:

Solvent free one-component moisture curing silicone rubber roof coating, having the following properties:

Color	White
Vehicle Base	100% Silicone
Weight	11.05 +/- .5 lbs per Gallon
Solid by Weight	95%
Solid by Volume	95%
Viscosity (ASTM D 562)	7,098 cps
Dry Film Thickness (@ 5 Gallons 250 sq./ft.)	30 mils
Dry Time:	
A. Rain Safe	2 Hours
B. Exposure	4-6 hours
C. Between coats	6 hours minimum
D. Full cure @ 70°F, 50% relative humidity	72 hours
<i>Drying Time is temperature, humidity and film thickness dependent</i>	
Clean Up	Virgin Mineral Spirits

- 4. Performance Characteristics:

Elongation	315%
Tensile Strength	290 psi
Tear Resistance (ASTM D 624)	25 lbs/linear feet
Permeance (ASTM E 96 Procedure BW)	7.2 US perms
Solar Reflectance Index (SRI)	110

- 5. Uniflex® Acrylic Rust Inhibitive Primer White having the following properties:

- 1. Color: White
- 2. Vehicle Base: Acrylic
- 3. Weight per Gallon: 11.2lbs
- 4. Solids by Weight (ASTM 2369): 57 ± 2%
- 5. Solids by Volume: 42 ± 2%
- 6. Viscosity @ 77° F (25° C): 100 ± 5KU
- 7. Dry Film Thickness: 3 mils (@ 1gal/100 sq ft less surface absorption))
- 8. Dry Time Exposure: 4-6 hours

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9. Between coats: 4-8 hours
10. Specific Gravity: 1.35
11. VOC: <50 g/l
12. Flash Point: N/A
13. Solvent: Water
14. Clean Up: Warm, soapy water

B. Accessories:

1. Uniflex® Polyester Fabric for flashing reinforcement 20-3850, 20-385A, B, C

- a. Weight: 3 oz./sq. yd.
- b. Mullen Burst 177 lbs. (ASTM D-3786)
- c. Trapezoid 16.1 lbs. (ASTM D-1117) Tear Strength
- d. Tensile Strength 57 lbs. (ASTM D-1682)
- e. Elongation at break 61-63% (ASTM D-1682)

2. Seam Tape: Uniflex® 20-802, 804, 806, 808

- a. Adhesive 20 mil butyl rubber
- b. Bond time Immediate aggressive adhesion
- c. Full bonding 24 hrs.
- d. Service temperature -10° F to 180° F
- e. Low temperature flexibility passes, no cracking
- f. Water resistance excellent
- g. Shelf life 475 PSI @ 60% elongation
- h. Peel Strength 10 lbs. per lineal inch

3. Sealants:

- a. Uniflex Silicone Rubberized Roof and Flashing Sealant 44-900 White
  - i. 100% Silicone
  - ii. Neutral Cure – High Modulus
  - iii. Color: Bright White
  - iv. Tack free time: Approximately 1 hour
  - v. Cure time: 24 hours
  - vi. Tensile Strength, die C (ASTM D412): 200 psi
  - vii. Elongation (ASTM D412): 608%
- b. Uniflex MS Hybrid Roofing Sealant 58-310 Black
  - i. Color: Black
  - ii. Single Component Scypolymer
  - iii. Cures and Adheres Underwater
  - iv. Tack Free Time: Approximately 90 Minutes
  - v. Cure Time: 24 hours
  - vi. Tensile Strength: 236 psi
  - vii. Elongation: 559%
  - viii. Grade: Gun/Trowel/Brush grade.
  - ix. Application Temperature: 30°F to 120°F
  - x. Service Temperature: -40°F to 200°F
  - xi. Requires Primer over TPO and PVC

4. Additional Materials:

- a. Roof Brush (Required when embedding fabric):
  - i. 4" Hand Held Roof Brush 20-504
  - ii. 10" Roof Brush Head 20-510
  - iii. 60" Roof Brush Handle Threaded 50-560
- b. Walkways (optional):
  - i. 20-40 mesh silica sand or quartz

### 3.1 INSPECTION AND TESTING

- A. Contractor shall inspect the roofing system and all roof surfaces to receive the silicone roof coating system. All conditions affecting the water tightness of the roof shall be identified by the Contractor. Contractor shall perform nondestructive testing (Infra-red photography, nuclear testing and/or Tramex tool and onsite inspection) on the roofing system and verify results with actual roof cores as may be necessary.
- B. Based on Contractor's inspection and testing, a roof plan shall be made to show all areas of water intrusion, ponding water, wet insulation, and any deteriorated or damaged decking or other materials.
- C. Contractor shall verify a minimum roof slope of 1/4 inch per foot and that all roof drains are clean and in good working order.
- D. Prior to application of the coating system, Contractor shall perform adhesion testing over substrates including previously coated and non-coated roof membranes. Contractor shall follow ASTM 4541 for approved field adhesion test methods. The minimum test patch size shall be one square foot (0.1 sm). Contractor shall allow roof coating to cure for a minimum of 72 hours prior to conducting peel test. Coating adhesion must achieve a minimum of two (2) pounds per lineal inch. Results of less than two (2) pounds per lineal inch shall be reported to Manufacturer and retested using primer. Contractor shall 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. All adhesion test results shall be recorded and submitted to Manufacturer for additional evaluation.
- E. If any unusual, unexpected or concealed conditions are discovered at any time prior to or during the work, the Contractor shall stop work immediately and notify the Owner, Owner's Representative and Manufacturer in writing as soon as possible.

### 3.2 PREPARATION

- A. Cleaning: Note if a leak-proof system is being installed, all of the following procedures are mandatory. Otherwise, as needed. High pressure wash utilizing a 2,000 psi pressure washer to remove all dust, dirt, loose rust and/or coatings, foreign matter, etc. Note: New metal must be allowed to weather a minimum of six (6) months due to residual oils on the surface resulting from the manufacturing process. If necessary to coat sooner, use an industrial cleaner/ degreaser such as Simple Green® to remove oil residue.
- B. Prime all rusted areas with Uniflex Rust Inhibitive Metal Primer.
- C. Replace loose or missing fasteners with oversize "Repair Type" fasteners.
- D. 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.
- E. Adhesion Test:
  - 1. An adhesion test must be completed over all substrates including previously coated and non-coated metal roofs prior to installation of roof coating.
  - 2. An X-Cut Tape Test in accordance with ASTM D3359 must be completed on previously coated substrates prior to installation of roof coating.
    - a. Verification of passing adhesion test results must be recorded and submitted to Roof Coating Manufacturer during warranty application process.
  - 3. Contact Roof Coating Manufacturer for required warranty compliance procedures.
  - 4. Adhesion tests on previously coated substrates are required for all areas including, but are not limited to, the following:
    - a. Field of existing metal roofing:
      - 1. Minimum number of tests: Two (2)
      - 2. Areas of existing metal roofing indicating worn substrates require additional testing.
    - b. Any change in existing metal roofing substrate
    - c. Existing metal roofing installed in varying phases
    - d. Shaded areas
    - e. Areas indicating ponding water
    - f. Previously coated areas.
  - 5. Where adhesion is less than desired, apply primer in accordance with Roof Coating Manufacturer's published literature.

F. Repair, removal, and replacement of existing metal roofing:

1. Metal panel deterioration compromising structural integrity including damaged, weakened, or corroded panels, fascia, gutters, vents, ridge caps, and flashings must be replaced. Contact Metal Roofing Manufacturer for repair, removal, and replacement of compromised material.
2. Remove rust with wire brush, sandblast, or mechanically abrade until substrate is smooth and rust free.
3. Remove old and damaged mastic repairs at laps, seams, and fasteners.

### 3.3 WEATHER CONDITIONS & TEMPERATURE REQUIREMENTS

- A. Surface applications temperatures: 40°F - 140°F.  
Air temperatures must be 40°F and rising before applying material.
- B. Roof surface must be dry with no precipitation in the forecast for the next 8 hours. Start calculation of 8-hour dry time after all work is completed. Low humidity, low temperatures, cloud cover and calm air will slow the curing process. High humidity, high temperatures, direct sun and wind will accelerate the curing process.
- C. Extra caution is needed when applying material in windy conditions. Never spray material with excessive wind. Contractor should constantly monitor wind direction to prevent over-spray. If winds become excessive, spraying should stop.

### 3.4 PREPARATION FOR COATING SYSTEM

- A. Ensure substrate is ready to receive roof coating in accordance with Roof Coating Manufacturer's published guidelines.
- B. Abandoned pipes and vent stacks should be removed and holes filled in and roofed with like decking, insulation and membrane per NRCA guidelines and industry recognized best practices.
- C. Detailing/Flashing:
  1. All detailing and flashings shall be completed prior to installation of roof coatings and basecoats.
  2. All detailing and flashings shall be installed per Roof Coating Manufacturer's published literature. If details are not available, installer should contact the manufacturer.
  3. Existing assembly must be continuous and secure prior to application of roof coating.
  4. Pretreatment of approved existing, intact, and secure metal roof seams.
  5. Fasteners:
    - a. Completely encapsulate fastener heads with sealer ensuring fastener is sealed to deck.
  6. Metal seams:
    - a. Horizontal laps:
      1. Metal panel laps opening more than one-eighth (1/8) inch wide gap shall be fastened together in accordance with Metal Roofing Manufacturer published literature at spacing and rate required to ensure an uninterrupted substrate, eliminating gaps.
      2. Using a stiff bristled brush or sealant knife apply Uniflex sealant (Silicone or MS Hybrid) at (32 wet mils) extending a minimum one (1) inch on each side of seam until fully coated ensuring a smooth and uninterrupted watertight finish.
    - b. Ridge cap seams:
      1. Apply pressure to under lapping panel next to horizontal lap.
      2. Metal panel seams opening more than one-eighth (1/8) inch wide gap shall be fastened together in accordance with Metal Roofing Manufacturer published literature at spacing and rate required to ensure a uninterrupted substrate eliminating gaps.
      3. Using a stiff bristled brush or sealant knife generously apply Uniflex sealant (Silicone or MS Hybrid) at (32 wet mils) extending a minimum one (1) inch on each side of seam until fully coated ensuring a smooth and uninterrupted watertight finish.
    - c. Formed ridge caps must have all seams sealed by applying sealant at (32 wet mils) extending a minimum one (1) inch on each side of seam until fully coated ensuring a smooth and uninterrupted watertight finish.
    - d. Crimped standing seams:
      1. Verify all crimps are undamaged and watertight. No detailing required.
    - e. Un-crimped vertical seams:
      1. Apply pressure to under lapping panel next to horizontal lap.



2. Metal panel seams opening more than one-eighth (1/8) inch wide gap shall be fastened together in accordance with Metal Roofing Manufacturer published literature at spacing and rate required to ensure a uninterrupted substrate eliminating gaps.
3. Detail un-crimped vertical seams; choose from the following methods:
  - a. Sealant (Uniflex Silicone or MS Hybrid):
    1. Using a stiff bristled brush or sealant knife apply sealant at (32 wet mils) extending a minimum one (1) inch on each side of seam until fully coated ensuring a smooth and uninterrupted watertight finish.
  - b. Uniflex Butyl Seam Tape:
    1. Install two (2) inch Uniflex Seam Tape centered directly over seam taking care not to bridge fasteners. Using steel seam roller, roll over tape to ensure secure attachment.
    2. At time of seam tape installation, apply a thin coat of Uniflex Silicone44 over tape to protect tape from water absorption or UV degradation.
  - c. Reinforced coating:
    1. Install one (1) layer of roof coating at (16 wet mils) extending four (4) inches on each side of existing metal roof seam.
    2. Center six (6) inch wide strip of Uniflex stitch bonded polyester fabric membrane over seam and fully embed fabric into coating ensuring a minimum of two (2) inches of fabric on each side of existing metal roof seam. Brush fabric for proper adhesion and removal of all voids. Take care to ensure fabric is not bridged over fasteners.
    3. Apply a second layer of coating at (16 wet mils) extending a minimum three (3) inches on each side of seam ensuring fabric is fully coated and has a smooth and uninterrupted watertight finish.
    4. Allow to cure prior to subsequent installations.

D. Pipe penetrations; choose from one of the following methods:

- a. Sealant (Uniflex Silicone or MS Hybrid):
  1. Using a stiff bristled brush or sealant knife apply sealant at one-eighth (1/8) inch thick (125 wet mils) extending four (4) inches on horizontal and eight (8) inches up vertical surface ensuring a smooth and uninterrupted watertight finish. Tool sealant to a zero taper at leading edges of sealant.
- b. Reinforced roof coating:
  1. Install one (1) layer of roof coating at (16 wet mils) extending four (4) inches on horizontal surface and a minimum of eight (8) inches up vertical surface.
  2. Center six (6) inch wide strip of Uniflex stitchbonded polyester fabric at pipe upturn and fully embed fabric into roof coating ensuring three (3) inches of fabric on both horizontal and vertical surfaces. Brush fabric for proper adhesion and removal of all voids.
  3. Apply second layer of roof coating at (32 wet mils) extending four (4) inches on horizontal surface and a minimum of eight (8) inches up vertical surface ensuring fabric is fully coated and has a smooth and uninterrupted watertight finish.

E. Roof curbs, steel supports, and parapets; choose from one of the following methods:

- a. Sealant (Uniflex Silicone or MS Hybrid):
  1. Using a stiff bristled brush or sealant knife apply sealant at one-eighth (1/8) inch thick (125 wet mils) extending four (4) inches on horizontal surface and a minimum of eight (8) inches up vertical surface ensuring a smooth and uninterrupted watertight finish. Tool sealant to a zero taper at leading edges of sealant.
- b. Reinforced roof coating:
  1. Install one (1) layer of roof coating at re (16 wet mils) extending four (4) inches on horizontal surface and a minimum of eight (8) inches up vertical surface.
  2. Center six (6) inch wide strip of Uniflex stitchbonded polyester fabric at parapet upturn and fully embed fabric into roof coating ensuring three (3) inches of fabric on both horizontal and vertical surfaces. Brush fabric for proper adhesion and removal of all voids.
  3. Apply second layer of roof coating at (32 wet mils) extending four (4) inches on horizontal surface and a minimum of eight (8) inches up vertical surface ensuring fabric is fully coated and has a smooth and uninterrupted watertight finish.

F. Metal edge: Re-secure loose metal, clean and allow to completely dry. Use three course method and coat with Uniflex® 44-300 WHITE.

- G. Pitch pans: Clean all exposed metal inside and out, fill and trowel to create a slight slope with Uniflex 58-360 Pitch Pan Roofing Sealant.
- H. Roof valleys and waterways:
1. Install one (1) layer of roof coating in direction of valley slope at (16 wet mils) extending roof coating at up twelve (12) inches each side of valley.
  2. Center minimum twelve (12) inch wide strip of reinforcement fabric over existing roof valley and fully embed reinforcement fabric into roof coating ensuring minimum nine (9) inches of reinforcement fabric on each side of valley. Additional overlapping courses may be used for wider valleys. Use a Uniflex Roof Brush (10"- KST020510/ 4" – KST020504) brush in reinforcement fabric for proper adhesion and removal of all voids.
  3. Where more than one piece of reinforcement fabric is required:
  4. Coat side and end laps of embedded reinforcement fabric with roof coating ensuring complete coverage of reinforcement fabric prior to installation of subsequent reinforcement fabric courses. Overlap of dry fabric is not acceptable.
  5. Lap ends of reinforcement fabric four (4) inches where more than one piece is required to ensure an uninterrupted watertight finish. Laps should be lapped running down slope as to avoid laps "bucking" water.
  6. Apply second layer of roof coating at (16 wet mils) fully encapsulating areas previously covered with a reinforced roof coating.
- I. Expansion Joints and Control Joints: 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**

### 3.5 COATING SYSTEM APPLICATION

A. 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.

B. 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.

C. Primer:

1. Based on existing surface conditions and adhesion tests performed by Contractor, Contractor may need to complete additional preparation, cleaning or priming of the substrate to achieve the required adhesion. If the coating does not pass the adhesion testing, Contractor shall contact the Manufacturer for any additional requirements.

D. Application Methods:

1. Roller- Minimum ¾" nap roller recommended. 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 .030 - .032 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.

E. Application of Roof Coating:

1. Single Coat: (may be applied in two coat application method at total based on environmental or roof substrate conditions- Preferred application spray applied- Roller application may require multiple coats on 15-20 year system applications)
  - a. Ten (10) year UNIGUARD Warranty:
    1. Apply one (1) layer of primary roof coating at one and a half (1.5) gallons per square [Twenty-four (24) wet mils; Twenty-two (22) mils DFT].
  - b. Fifteen (15) year UNIGUARD Warranty:
    1. Apply one (1) layer of primary roof coating at two (2) gallons per square [Thirty-two (32) wet mils; Thirty (30) mils DFT].
  - c. Twenty (20) year UNIGUARD Warranty:
    1. 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].

F. Walkways: (optional)

1. Apply additional roof coating in a contrasting color at traffic areas at a minimum (Sixteen (16) wet mils).

G. Traffic areas:

1. Cured silicone can be slippery. Limit pedestrian traffic to designated walkways.

### 3.6 REPAIRS

- A. In the event that the coating is damaged or punctured, repairs are to be performed as follows:
- B. Install one (1) coat of Uniflex44 Silicone roof coating at (16 wet mils) extending four (4) inches on each side of repair area.
- C. 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.
- D. Apply second coat of Uniflex44 Silicone roof coating at (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.

### 3.7 FIELD QUALITY CONTROL

- A. Limit traffic on coated surfaces for a minimum of two (2) days.
- B. 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.

### 3.8 JOB SITE CLEAN UP

- A. Remove masking and protection.
- B. Notify Owner project is complete so HVAC vents can be opened and units restarted.
- C. 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.

**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**