

PART 1 – GENERAL

DESCRIPTION

- A. Restoration of Structural Metal Roofing using Silicone roof coating. This Specification is suitable to protect, restore and extend the service life of Structural Metal roof systems.
- B. This Field Reference Guide is not a substitute for the Full Specification that can be found at www.uniflexroof.com.

REVIEW / SUBMITTALS

- A. Product and Material Safety Data Sheets for each product indicated in this Specification.

QUALITY ASSURANCE

- A. 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.
- B. 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.
- C. All substrates must be peel tested for adhesion strength.
- D. A Moisture Survey should be conducted to identify any wet roof assembly components.

PRODUCT DELIVERY, STORAGE AND HANDLING

- A. 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.

PROJECT CONDITIONS

- A. 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.
- B. 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.
- C. Wet insulation and any deteriorated or damaged decking or other materials must be removed and replaced before application of the coating system.

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:
- B. Ambient air temperature must be 40°F and rising, but not above 120°F during the entire application and curing process.
- C. 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.

WARRANTY

- A. Manufacturer may issue to the Building Owner either a Materials Warranty or Full Systems Warranty as may be agreed to at the 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.
- B. The Contractor may provide the Owner with a workmanship warranty as may be agreed to by the Contractor at time of contract award.

PART 2 – PRODUCTS

- A. Silicone Roof Coating:
 - 1. Uniflex[®] 44-300 SILICONE WHITE
- B. Primer:
 - 1. Uniflex[®] 34-520 Rust Inhibitive Primer
- C. Sealants:
 - 1. Uniflex[®] OneFlash Sealant 51-920 Gray
 - 2. Uniflex[®] OneFlash Sealant 51-921 White
 - 3. Uniflex[®] MS Hybrid Roofing Sealant 58-310 Black
- D. Granules:
 - 1. Torginol 25-A Grade Angular Resin Quartz granules

PART 3 – EXECUTION PREPARATION

- A. After inspection and testing, the Contractor shall make all necessary repairs to the roofing system.
- B. Contractor shall not proceed with application of the coating system until all repairs have been made and any unsatisfactory conditions have been corrected, including any repairs which may be recommended by the Manufacturer or any design professional. Preparation of the roof substrate is the responsibility of the Contractor.
Contractor shall remove and replace any wet insulation and deteriorated or damaged decking or other materials with like kind or better-quality materials.
- C. Prior to power washing, Contractor shall repair all splits, open seams, tears, cuts and blisters in the membrane and flashings, and any other conditions affecting the water tightness of the roof. The membrane must be made sound and watertight. All repairs shall be made in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
- D. Any mechanical equipment and roof penetrations including stacks, vents and pipes must be securely installed, properly sealed and made completely watertight, and any abandoned pipes and vent stacks shall be removed, and holes filled in and roofed with like decking, insulation and membrane, all in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
- E. All roof curbs and parapet walls shall be properly sealed and waterproofed in accordance with NRCA Guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
- F. Pitch Pans
 - 1. Remove one (1) inch of existing pitch pan material, fill and trowel to create a slight slope with Uniflex 51-920 Roofing Sealant.
- G. Contractor shall secure and seal all loose metal in accordance with NRCA guidelines and good roofing practice. Upon written request, Manufacturer can provide additional repair details.
- H. All 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.
- I. Surface Cleaning:
 - 1. Contractor shall first remove any dirt or debris from the roof by using a broom or air broom.
 - 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.
 - 9. All areas of corrosion shall be primed with Uniflex Rust Inhibitive Primer and allowed to fully cure.
- J. 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 old and damaged mastic repairs at laps, seams, and fasteners.

K. Fasteners

1. Inspect and replace all damaged fasteners.
2. Tighten all fasteners to Metal Roof Manufacturer's original specifications.

L. Detailing/Flashing

1. All detailing and flashings shall be completed prior to installation of roof coatings.
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. 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.
 - a. Horizontal end laps and vertical fastened seams:
 - 1) Using a stiff bristled brush or sealant knife apply OneFlash sealant at one-sixteenth (1/16) inch thick (60 wet mils) to existing panel lap extending 2 inches on either side of the lap seam.
 - b. Crimped vertical standing seams:
 - 1) Verify all crimps are undamaged and watertight. No detailing required.
 - c. Ridge cap seams:
 - 1) Apply pressure to under lapping panel next to horizontal lap.
 - 2) Using a stiff bristled brush or sealant knife apply OneFlash sealant at one-sixteenth (1/16) inch thick (60 wet mils) to existing panel lap extending 2 inches on either side of the lap seam.
 - d. Rake edge:
 - 1) Flush Rake edge: Using a stiff bristled brush or sealant knife apply OneFlash sealant at one-sixteenth (1/16) inch thick (60 wet mils) to existing panel lap extending 2 inches on either side of the lap seam.
 - 2) Raised rake edge: No additional detailing required.

M. 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.

N. Parapet Walls and other termination points

1. Inspect all sealants at counter flashings and replace as needed.

O. 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. Wood blocking or sleepers shall be raised to allow the coating system to be installed in a continuous monolithic manner.

P. Expansion Joints 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.

3.4 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. Application Methods:
1. Roller: Minimum ¾" nap roller recommended.
 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 using 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.
- D. Application of Roof Coating: (May require multiple coats to meet DFT requirements)
1. Application of Uniflex® Silicone 44:
 - a. Twenty (20) year UNIGUARD Warranty: Apply one (1) layer of primary UNIFLEX roof coating at two and a half (2.5) gallons per square [Forty (40) wet mils; Thirty-seven (37) mils DFT].
- E. Walkways: (optional)
1. Prior to walkway surfacing allow for roof to cure for a minimum of 24hrs.
 2. Apply additional roof coating at a minimum of one (1) gallon per square; Sixteen (16) wet mils.
 3. Apply roof granules uniformly into wet roof coating at a rate of 25 pounds per 100 square feet.
 4. Allow roof coating to dry.
 5. Remove loose particles to avoid clogging drains.
- F. Traffic areas:
1. Cured coating can be slippery. Limit pedestrian traffic to designated walkways.

3.5 FIELD QUALITY CONTROL

- A. Limit traffic on coated surfaces for a minimum of two (2) days.
- B. 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.
- C. Final Observation and Verification:
1. Prior to demobilization from the site, a final inspection of the roof coating system shall be carried out by the Owner's Representative and Contractor.
 2. 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.
 3. Any areas of insufficient coating thickness will require re-coating by Contractor.
 4. The roof coating system must be fully adhered to the roof substrate. Any voids left under the system must be corrected.
 5. All work for Uniflex warranty must be completed using Uniflex materials. Material invoices must be submitted to Uniflex to verify products installed.
 6. To maintain warranty eligibility and coverage, Owner must follow all inspection and maintenance requirements described in the Uniflex Owner's Packet.

3.6 JOB SITE CLEANUP

- 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.

This Field Reference Guide provides select preparation and application information for use by roofing crews. It is not intended to replace the full System Specification found at www.uniflexroof.com

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.