

ROOFTITE

Restoration Coatings

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Note: In addition to information listed in this section Specifiers and Applicators should reference Spec Supplement and Design Reference Sections for other pertinent information.

RoofTite

Restoration Coatings

May 2020

This Specification section and associated attachments represent RoofTite requirement for restoration of various existing roofing systems with the RoofTite coatings and accessories.

A thorough investigation of the existing roof must be performed by a qualified representative of the building owner. The investigation is to assess the condition of the roof and to determine any needed repairs prior to commencing the restoration work. The RoofTite Applicator shall assess the condition of the roof surface to determine the level of preparation and repairs needed. The contractor shall also perform various adhesion tests to determine whether the use of primers will be required.

PART I GENERAL

1.01 Description

This restoration system utilizes the application of RoofTite Silicone or RoofTite Acrylic coatings after thoroughly preparing the existing roof surface to receive the new coating. An initial assessment is performed by the Applicator to evaluate the condition of the roof surface and perform adhesion tests to determine the cleaning and priming requirements. After preparation of the existing roof surface, the coating is applied to achieve the desired dry film thickness.

1.02 Applicability

- A. The restoration coating is intended to enhance and extend the service life of an existing sound and watertight roof or those that may experience occasional minor leaks. The system is not suitable for the restoration of roofs which have exceeded or are approaching the end of their service life and require substantial repair.
- B. The assessment and examination of the existing roof surface to be restored shall be performed by the RoofTite Applicator or RoofTite Representative. The assessment and examinations shall focus on the condition of the roof, surface preparation required and the components to be restored.
- C. When in-depth investigation is needed to assess the entire existing roof system, a roof consultant or qualified representative shall be obtained by the building owner to conduct such investigation. The investigation will identify all necessary system repairs prior to commencing restoration work.

1.03 Quality Assurance

- A. Moisture surveys are strongly recommended, when moisture entrapment is suspected, on roofs installed over vapor barriers, or existing membranes that may have experienced a leak.

- B. Initial sampling and core cuts may be collected by the RoofTite Applicator for moisture analysis. Detailed moisture surveys may be conducted by a qualified third-party using IR scans, nuclear scans or by taking core cuts.
- C. For adhesion and core cut tests, a minimum of 3 adhesion/cut test areas are required per 10,000 sq. ft. area with additional adhesion/cut test area recommended for every additional 10,000 sq. ft. of roofing.
- D. During the initial roof inspection by the RoofTite Applicator, adhesion tests are required to assess the adhesion of the coating and to determine the extent of preparation work needed for the surface. The adhesion test is performed after the surface is entirely cleaned. A minimum value of 2 (pounds per linear inch) should be the target, otherwise additional cleaning and priming may be required. Consult with a RoofTite representative for additional recommendations
- E. When inspecting an existing gravel built-up roof surface, a small sample (1/2" - 1") of the asphaltic surface shall be immersed in a clear glass bottle containing Isopropyl alcohol. After shaking vigorously, the liquid in the bottle should be observed for any discoloration.
 - 1. If discoloration is detected, then the sample is asphalt.
 - 2. If the liquid remains clear it indicates that the sample is coal tar.

Caution: The coating restoration system is not intended for use on coal tar pitch roofs.

- F. When applying the coating restoration system over asphaltic roofs, modified bitumen, a cap sheet or metal roofs with rust, the use of RoofTite Prime-Tek Bleed Block Plus primer is strongly recommended even if an adhesion test yields acceptable value.
 - 1. For asphaltic roofs, RoofTite Prime-Tek Bleed Block Plus primer will help prevent bleed through and the possible staining of the new coating.
 - 2. For metal roofs, RoofTite Prime-Tek Bleed Block Plus primer will inhibit future rust formation.

1.04 Restrictions and Exclusions

- A. This restoration coating system is not suitable over roofs with severely ponded conditions or those which are nearing the end of their service life and require substantial repairs.
- B. Do not apply this restoration system on roofs which have become severely crazed and brittle. Widespread cracks, punctures, blistering, and tears scattered through the roof are deemed unacceptable and the roof shall not be restored using this system.
- C. Metal roofs with severe rust or panel deflections are not restorable. The severely rusted/deflective panels must be removed and replaced. Small areas of surface rust can be treated as outlined in the Attachment III "Substrate Preparations – Metal Roofing".
- D. Roofs which have sustained severe wind or hail damage cannot be restored unless thoroughly investigated by a qualified consultant, hired by the building owner, and the roofs have been repaired and returned to serviceable condition.

- E. Existing roofs with moisture entrapment or large delaminated areas must be investigated by a qualified roof consultant and the roof returned to a serviceable condition.
- F. Ballasted roof systems are generally not suitable for restoration coating systems
- G. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of RoofTite and RoofTite shall not be responsible for any claims, repairs, restoration or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.05 Job Conditions

- A. Prior to application of the coating, the applicable Product Data Sheet (PDS) shall be referenced to identified surface temperature limitations based on coating system to be utilized. The service temperature of any surface to be coated shall not exceed 180°F (82°C).
- B. Moisture in the form of rain, fog, frost, dew may adversely affect the coating and adhesion. Do not apply coating when these conditions exist.
- C. To prevent surface contamination from coating overspray, mask areas where coating is to be terminated. With owner permission, seal/close ventilation intakes and protect surrounding equipment from potential overspray.
- D. Compatibility to chemical exposure will depend on type of coating used. RoofTite should be contacted for verification of compatibility with chemicals or specific waste products that may come in contact with the roofing system.

Caution: Surface moisture and icy conditions are not easily detected on lighter color membranes (white, tan, gray, etc.) especially those located in cold regions. The roof surface may become extremely slippery and care shall be exercised when accessing the roof in the early morning hours (dew formation), any time after rain or during the winter. The use of sunglasses is strongly recommended when reflective coatings are used as the final coat.

1.06 Product Delivery, Storage and Handling

- A. Deliver materials to the site in their original, tightly sealed containers, all clearly labeled with manufacturer's name, product identification and lot number.
- B. Safely store materials in their original containers out of the weather, keep dry and within the temperature limits specified by the manufacturer. Refer to specific product PDS for storage requirements.
- C. All materials shall be stored in compliance with applicable fire and safety requirements.
- D. Protect materials from damage during transit, handling, storage and application.
- E. If loading materials onto the roof, the RoofTite Applicator must comply with the requirements of the specifier/owner to prevent overloading and possible disturbance to the building structure.

PART II PRODUCTS

2.01 General

The product components of this RoofTite Restoration Coating System are composed of RoofTite products or those accepted by RoofTite as compatible with this roofing system. The installation, performance or integrity of products by others, **when selected by the specifier and accepted as compatible**, is not the responsibility of RoofTite.

2.02 Coatings

Table 1

Available Coating			
RoofTite Silicone		RoofTite Acrylic	
Acronym		Acronym	
LS	Low Solids	QS	Quick Set
HS	High Solids	HT	High Tensile
HSLV	High Solids Low VOC	BB	Bleed Block Plus
		FR	Fire Rated
		BC	Base Coat
		TC	Top Coat

Note- Contact RoofTite for additional products and accessories

A. RoofTite Silicone Coating

The silicone roof coating membrane consists of an elastomeric, liquid applied material, domestically engineered and produced. The coating can be installed in one or multiple coats. This product is designed to provide protection for a wide range of building surfaces such as roofs, vertical walls, masonry, and spray polyurethane foam (SPF) roofing systems. It is excellent for waterproofing and restoring existing roof systems, as well as for weather protection of SPF roofing systems. The product is suitable for application through airless spray equipment, roller, spreader bar, squeegee, or brush. Refer to table 1 for available types of coatings.

Note: Table 2 shows the physical properties for the RoofTite HSLV and LS silicone coatings. For other silicone coatings, the applicable product data sheet should be referenced for product physical properties.

Table 2

Physical Property	Test Method	RoofTite HSLV Silicone Coating	RoofTite LS Silicone Coating
Volatile Organic Content (VOC), (g/l)	EPA Method 24	<50	<250
Tear Resistance, lbs/in	ASTM D 624	24	37
Tensile Strength, die C, psi	ASTM D 412 ASTM D 2370*	244* @73°F 227* @ 0°F	460 @73°F
Elongation, %	ASTM D 412 ASTM D 2370*	187* @73°F 121* @ 0°F	235 @73°F
Permeability, perms	ASTM E 96B	6.5	6.1
Solar Reflectivity (White)	ASTM C 1549	0.82 (3 year aged) 0.87 (initial)	0.66 (3 year aged) 0.85 (initial)
Emissivity (White)	ASTM C 1371	0.89 (3 year aged) 0.9 (initial)	0.9 (3 year) 0.85 (initial)
Solar Reflectance Index (SRI) (White)	ASTM E 1980	109	106
Low Temperature Flexibility	ASTM D 522 Method B	-15°F (-26°C) Pass	-15°F (-26°C) Pass
Solids Content by Weight %	ASTM D 1644	96±2	80±2
Solids Content by Volume %	ASTM D 2697	93±2	69±2
Cure Time	@100°F & 90% Humidity @40°F & 20% Humidity	Min 2hrs Max 8-12 hrs	Min 2hrs Max 8- 12 hrs
Shelf Life		1 year	1 year

B. RoofTite Acrylic Coatings

1. RoofTite Acrylic

RoofTite Acrylic Coating is a 100% acrylic, single-component, water-based, premium quality elastomeric coating for spray, brush, or roller application. This product is designed to provide protection for a wide range of building surfaces such as roofs, vertical walls, masonry, and spray polyurethane foam (SPF) roofing systems. It is excellent for waterproofing and restoring existing roof systems, as well as for weather protection of SPF roofing systems. RoofTite Acrylic coating is applied in multiple coats, with a minimum base coat (BC) and a top coat (TC) for finishing. RoofTite TC can be used as a top or base coat. RoofTite BC can be used as a base coat but is not recommended as

the top finish coat.

2. RoofTite HT

RoofTite HT Acrylic Coating is a 100% acrylic, single-component, water-based, high tensile strength, elastomeric coating. This product is suitable for spray, brush, or roller application and is designed to provide protection for a wide range of building surfaces, such as roofs, vertical walls, masonry, and spray polyurethane foam (SPF) roofing systems. It is excellent for waterproofing and restoring existing roof systems, as well as for weather protection of SPF roofing systems

3. RoofTite BB

RoofTite BB Acrylic Coating is a 100% acrylic, single-component, water-based, high-quality elastomeric coating for spray, brush, or roller application. RoofTite BB is designed for use as an acrylic base coating to block bleed-through from asphaltic substrates and PVC plasticizer migration. It is excellent for waterproofing and restoring existing roof systems, as well as prepared PVC, metal, and asphaltic surfaces. Use RoofTite BB with RoofTite acrylic topcoats for a premium coating system.

Refer to Table 1 for available types of coatings.

Table 3

Physical Property	Test Method	RoofTite Acrylic Coating (TC)	RoofTite HT	RoofTite BB
Tensile Strength, psi (Max @ 73°F)	ASTM D 2370	273	475	300
% Elongation @ Break (73°F)	ASTM D 2370	262	580	304
Volume Solids, %	ASTM D 2697	55 ±2	55±2	55±2
Weight Solids, %	ASTM D 1644	68±2	65±2	69±2
Volatile Organic Content (VOC), (g/l)	EPA Method 24	<50	<50	<50
Tear Resistance (Die C), lb f/in	ASTM D 6694/ 624	88	130	
Permeance, perms	ASTM D 1653B	17	12	4
Low Temp Flex	ASTM D 522	Pass	Pass	Pass
Solar Reflectivity	ASTM C 1549	0.88	0.87	
Emissivity (white)	ASTM C 1371	0.90	0.88	
Solar Reflectance Index (SRI) (White)	ASTM E 1980	111	110	
Cure Time		Recoat 12-24 hrs Tack Free 2-12 hrs	Recoat 12-24 hrs Tack Free 2-12 hrs	Recoat 12-24 hrs Tack Free 4-5 hrs
Shelf Life		1 year	1 year	1 year

2.03 Primers

A. RoofTite Prime-Tek Epoxy Primer

RoofTite Prime-Tek Epoxy Primer is a two component, 1:1 ratio “A” is white, and part “B” is black to dark grey, the combined product is medium grey and is a water-based primer. Adheres well to most metals, organic and synthetic polymers, wood, masonry and vitreous surfaces. This primer may also be used as a masonry block filler. Do not use on copper or silver. Once mixed, material has a useable pot life of 2 hours maximum at 75°F.

Table 4

Physical Property	Test Method	RoofTite Prime-Tek Epoxy Primer Part A and B
Solids Content by Weight, %	ASTM D 1644	60 ±2
Solids Content by Volume, %	ASTM D 2697	42.5 ±2
Density, lbs/gal	ASTM D 1475	12.3 (A) 7.9 (B)
VOC, g/l	EPA Method 24	<50
Cure Time @ 75°F		Dry to touch 0.5-1.5 hours Full cure 12-24 hours
Shelf Life		1 yr

B. RoofTite Prime-Tek Acrylic General Purpose Primer (Black)

RoofTite Prime-Tek Acrylic General Purpose Primer (Black) is suitable when a fast-drying primer is needed. This product may be used on many surfaces for effective protection: BUR, Metal, Concrete (min 30 day cured), Polyurethane Foam, Acrylic Coatings and Masonry.

Table 5

Physical Property	Test Method	RoofTite Prime-Tek Acrylic General Purpose Primer
Solids Content by Weight, %	ASTM D 1644	45±2
Solids Content by Volume, %	ASTM D 2697	38±2
Density, lbs/gal	ASTM D 1475	9.4
VOC g/l	EPA Method 24	<50
Cure Time		Dry to touch @ 75°F in 0.5 -1 hours, Full cure in 2-6 hours
Shelf Life		1 yr

C. RoofTite Prime-Tek Bleed Block Plus Primer (Green)

RoofTite Prime-Tek Bleed Block Plus Primer (Green) is a water-based, one-part primer that blocks bleed-through from modified bitumen and other asphaltic substrates. Prime-Tek Bleed Block Plus Primer enhances coating adhesion and has low VOC levels. This product dries quickly and has excellent resistance to heat, cold, moisture, and weathering.

Table 6

Physical Property	Test Method	RoofTite Prime-Tek Bleed Block Plus Primer
Solids Content by Volume, %	ASTM D 2697	38±2
Density per Gallon (A&B), lbs/gal	ASTM D 1475	10.1
VOC, g/l	EPA Method 24	<50
Cure Time		Dry to touch @ 75°F in 0.5 -1 hour, Full cure in 2-8 hours
Shelf Life		1 yr

D. RoofTite Prime-Tek TPO II Primer

RoofTite Prime-Tek TPO II Primer is a low-VOC, solvent-based primer designed to promote optimal adhesion of RoofTite Acrylic Coating and RoofTite Ultra Silicone Coatings to new or existing TPO. The application of Prime-Tek TPO II Primer is simple, cost effective, and time efficient. RoofTite Prime-Tek TPO II Primer is to be used exclusively on TPO membranes and is not compatible with EPDM or PVC membranes. RoofTite Prime-Tek TPO II Primer is slightly tinted to distinguish primed areas on bright white TPO membranes.

Table 7

Physical Property	Test Method	RoofTite Prime-Tek TPO II Primer
Solids Content by Volume, %	ASTM D 5301	1%
Solids Content by weight, %	ASTM D 2369	2.5% (±.5%)
Density (A&B), lbs/gal	ASTM D 1475	9.5 lbs. (±.5)
VOC, g/l	ASTM D 3960	<100 g/l
Cure Time		15 minutes @ 75°F (24°C), 50% R.H.
Shelf Life		1 yr

General Product Limitations

Protect from freezing during shipping and storage. Do not apply primer or coatings when it is raining or if the threat of rain exists. Do not apply when the dew point is less than 5°F above ambient temperature. Subsequent coats should be applied within 48 hours of prior applications to ensure full and uniform adhesion. Do not use on new concrete (less than 30 days). Refer to individual PDS and SDS for specific product application, storage and handling requirements.

General Substrate Recommendations

For additional substrates, preparation or approved primers contact RoofTite.

Table 8

RoofTite Silicone			
Roof Surface	Cleaner	Pressure Wash	Primer
New EPDM	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
Aged EPDM*	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
New TPO	N/A	N/A	RoofTite Prime-Tek TPO II
Aged TPO*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek TPO II
New PVC/KEE			
Aged PVC/KEE*	RoofTite Prime-Tek Membrane	Yes	RoofTite Prime-Tek Epoxy Primer

	Cleaner		
Hypalon®**	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
New Ferrous Metal, Galvanized, or Galvalume finished*	N/A	Yes	N/A
Aged Ferrous Metal, Galvanized, or Galvalume finished*	N/A	Yes	RoofTite Prime-Tek Epoxy
New Concrete	N/A	N/A	RoofTite Prime-Tek Epoxy or General Purpose
Aged Concrete*	N/A	Yes	RoofTite Prime-Tek Epoxy or General Purpose
New Smooth BUR	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged Smooth BUR*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New APP	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged APP*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SBS - Smooth	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged SBS - Smooth*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SBS – Granulated	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged SBS - Granulated*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SPF	N/A	No	**
Repair SPF*	N/A	No	RoofTite Prime-Tek General Purpose
Aged Silicone*	N/A	Yes	N/A
Aged Acrylic*	N/A	Yes	N/A

*- Field adhesion test required (2.0 pli minimum)

** - Use General Purpose or Tie-In Primer between day-to-day applications or if SPF will not be coated within 24 hrs.

Table 9

RoofTite Acrylic			
Roof Surface	Cleaner	Pressure Wash	Primer
New EPDM	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
Aged EPDM*	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
New TPO	N/A	N/A	RoofTite Prime-Tek TPO
Aged TPO*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek TPO
New PVC/KEE			

Aged PVC/KEE*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Epoxy
Hypalon®**	RoofTite Prime-Tek Membrane Cleaner	Yes	N/A
New Ferrous Metal, Galvanized, or Galvalume finished*	N/A	Yes	N/A
Aged Ferrous Metal, Galvanized, or Galvalume finished*	N/A	Yes	RoofTite Prime-Tek Epoxy
New Concrete	N/A	N/A	RoofTite Prime-Tek Epoxy or General Purpose
Aged Concrete*	N/A	Yes	RoofTite Prime-Tek Epoxy or General Purpose
New Smooth BUR	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged Smooth BUR*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New APP	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged APP*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SBS - Smooth	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged SBS - Smooth*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SBS – Granulated	N/A	Yes	RoofTite Prime-Tek Bleed Block Plus
Aged SBS - Granulated*	RoofTite Prime-Tek Membrane Cleaner	Yes	RoofTite Prime-Tek Bleed Block Plus
New SPF	N/A	No	**
Repair SPF*	N/A	No	RoofTite Prime-Tek General Purpose
Aged Acrylic*	N/A	Yes	N/A

*- Field adhesion test required (2.0 pli minimum)

** - Use General Purpose or Tie-In Primer between day-to-day applications or if SPF will not be coated within 24 hrs.

2.04 Other ROOFTITE Products

- A. **RoofTite Seal-Tek Acrylic Mastic** is a single-component, acrylic, water-based mastic. This mastic is intended for use as a flashing material for most substrates and as a sealer for seams, fasteners, penetrations, and on other details as part of the restoration coating. RoofTite Seal-Tek Acrylic Mastic can also be used to fill small cracks, gaps and alligatored asphaltic roof surfaces
- B. **RoofTite Seal-Tek Silicone Mastic** is a single-component, high-build, silicone mastic. Upon cure, RoofTite Seal-Tek Silicone Mastic forms a durable, weatherproof sealant. Designed for use with RoofTite silicone restoration coating systems, this mastic can also be used to seal roof penetrations, seams, fasteners, and other roofing substrates and surfaces.

Note: RoofTite Seal-Tek Silicone Mastic can only be coated with RoofTite silicone coating.

- C. **RoofTite Seal-Tek Silicone Sealant** is a medium-modulus silicone sealant that forms a durable, weatherproof sealant used in conjunction with RoofTite silicone restoration coating system. This sealant can be used to seal roof penetrations, seams, fasteners, and other roofing substrates and surfaces.

Note: RoofTite Seal-Tek Silicone sealant can only be coated with RoofTite silicone coating.

- D. **RoofTite Seal-Tek Micro Fibers** are micro-fine, high-tensile, polyethylene fibers used as a general thickener in RoofTite and RoofTite ULTRA coatings to increase tensile strength, reduce sag, and thicken the coating into a trowel, roll-on or brushable mastic. The thicker mixture allows for fabrication of cants and filling around irregular surfaces. The process can adapt the coating product to the project's need and conditions. The RoofTite Seal-Tek Micro Fibers can also be added to RoofTite and RoofTite coatings to create an excellent repair material for hail and mechanical damages to spray polyurethane foam (SPF) and coated roofing systems.
- E. **RoofTite Seal-Tek Reinforcing Fabric** is a stitch-bonded, 100% polyester material made specifically for use with elastomeric coatings in roof membrane construction. RoofTite Seal-Tek Reinforcing Fabric has high absorption capability, allowing it to easily wet into and become encapsulated by the liquid roofing membrane, forming tough, waterproof details or overall reinforcement. RoofTite Seal-Tek Reinforcing Fabric is used to reinforce detail areas such as seams, splits, drains, vents, and other penetrations through the roof surface.
- F. **RoofTite Prime-Tek Membrane Cleaner** is a low-viscosity, sprayable liquid used to clean existing roof surface prior to pressure washing and application of restoration coatings. This cleaner improves adhesion to roof membranes and is clear to purple in color.

2.05 Equipment

For spray equipment considerations, please refer to SPFA-144- Coating Equipment Guideline or consult the spray equipment manufacturer directly. For additional recommendations, refer to RoofTite specific Product Data Sheet.”

2.06 Granules

Granules are optional. They may be used to enhance aesthetics, impact resistance, slip resistance or highlight walkways. Granules shall be number 11 screen size, ceramic-coated roofing granules, color to match topcoat. Quartz or silica aggregate are also acceptable. Apply at a rate of 30-40lbs per 100 square feet.

2.07 Other Related Products

- Rollers with 1/2” Nap
- Brushes
- 2,000 psi rated power washer
- Detergent

PART III EXECUTION

Requirements listed in this specification are considered. Additional requirements dictated by Regulatory Agencies, Building Insurance or Specifiers must be complied with and are beyond the scope of this specification.

3.01 General

- A. Safety Data Sheets (SDS) must always be on location during transportation, storage and application of materials. The applicator shall follow all safety regulations as recommended by OSHA, and/or other agencies having jurisdiction.
- B. To ensure most current installation requirements are met, Product Data Sheets should be available on site.
- C. Comply with building owner requirement for onsite material storage and campus regulations. Place dumpster and other equipment in areas which have been designated by the building owner.
- D. The worksite must be kept in an organized and orderly fashion. All waste products must be removed and disposed of, in accordance with local ordinances.
- E. Subject to project conditions, it is recommended to begin the application of this restoration system at the highest point of the roof and work to the lowest point.

3.02 Surface Inspection

The assessment and examination of the existing roof system to be restored shall be performed by the RoofTite Applicator or a RoofTite Representative. The assessment and examinations shall focus on the condition of the roof surface and the components to be restored.

- A. When in-depth investigation is needed to assess the entire existing roof assembly. A roof consultant shall be obtained by the building owner to conduct such investigation. Investigation shall identify all necessary system repairs prior to commencing restoration work.
- B. If certain major repairs have been identified that required membrane removal, replacement or the addition of new insulation, such repairs must be performed with by an authorized applicator trained on the specific roof system and in accordance with manufacturer guidelines to insure the repaired section is sound and leak free.
- C. This restoration coating system is not suitable for roofs with severe ponding conditions where water accumulates on the surface of the membrane for periods greater than 48 hours, in areas scattered across 20% of the roof. If restoration is being considered the affected areas shall be repaired to achieve positive drainage and properly sealed. Refer to appropriate attachment for specific system repairs.

Note: Consult **Attachment I** - "Assessment and Investigation" for the applicable guidelines for assessing various roof assemblies.

3.03 Substrate Preparation

- A. Attachments II-V, included at the end of this Restoration Coating section, contain information on the

appropriate substrate preparation (cleaning, priming, and repairing), categorized by the type of the existing roof membrane.

Attachment II – “Substrate Preparation – Asphaltic Roofing”

Attachment III – “Substrate Preparation – Metal Roofing”

Attachment IV – “Substrate Preparation – SPF”

Attachment V – “Substrate Preparation – Single Ply Membrane”

- B. Refer to tables 9 & 10 included in Part II for general substrate recommendations concerning cleaning and priming of the various types of roofing surfaces. Certain roofs may only require cleaning and others may require the use of cleaning and primer to enhance coating adhesion. Certain roofs may require primer in addition to cleaning to prevent staining, bleed through or inhibit the formation of surface rust. The appropriate table may be referenced as a general guide. Contact RoofTite for additional recommendations.
- C. For all aged substrates, adhesion tests are required, as outlined in the quality assurance article, to determine the extent of the surface treatment and the use of primers. Adhesion tests are strongly recommended on all new substrates to verify suitability of general substrate recommendations. Such testing is recommended at an earlier stage of the project, preferably prior to the bid, and may be performed during the initial roof inspection and surface assessment performed by the RoofTite Applicator or RoofTite representative.
- D. Do not commence with surface repairs unless all system related issues and imperfections have been addressed by the building owner and their design representative.
- E. Clean and prepare surface to receive the restoration coating. Remove all dirt, loose and flaking particles, grease, oil, laitance, pollution fallout, and other contaminants that may interfere with proper adhesion.

Note: The use of a stiff bristle (soft for SPF) push broom and pressure washing for cleaning and surface preparations are required.
- F. When required, clean the existing surface with applicable cleaning solution and power-wash with clean water. The appropriate attachment at the end of this section may be referenced for specific substrate preparation requirements.

3.04 Surface Repair & Detail Work

- A. Depending on the type of roof system being restored, asphaltic, metal, SPF or a single ply, vulnerable areas such as seams, flashing overlaps, expansion joints, vertical curbs, and other roof penetrations must be prepared to extend the watertight performance. In addition, other identified surface deficiencies such as blisters, minor splits, tears, cracks, surface rust and punctures must be prepared as outlined in the specific attachment.
- B. In these repair locations, reinforcing fabric imbedded into the base coat and covered with the topcoat, may be used to overlay deficient areas. A mixture of Micro Fibers and coating may also be used as identified in the “specific preparation attachment”. The ratio of such a mixture (roller, brush, or trowel) will vary in its concentration depending on the area to be treated. The appropriate attachment may be referenced for the specific ratio. After completing the necessary prep work using coating and reinforcing fabric or the Micro Fibers coating mixture, allow repaired area to cure. Curing time will vary based on

temperature and humidity level. Refer to the RoofTite PDS for the acceptable cure time.

- C. Attachments II-V, included at the end of this Restoration Coating section, contains information on the appropriate surface repair and detail work, categorized by the type of the existing roof membrane.

Attachment II – “Substrate Preparation – Asphaltic Roofing”

Attachment III – “Substrate Preparation – Metal Roofing”

Attachment IV – “Substrate Preparation – SPF”

Attachment V – “Substrate Preparation – Single Ply Membranes (EPDM, TPO and PVC)”

3.05 Coating Application

A. General

1. Do not apply coating if weather conditions will not permit complete cure (24-hour period) before rain, dew, fog or freezing temperatures occur.
2. When performing surface treatments prior to coating, use acrylic mastic for acrylic coatings and silicone mastics for silicone coatings. All mastics and sealants must be allowed to fully cure before applying coating.
3. Using a high-pressure compressed air or an air blower, blow all dust, dirt and other contaminants off the treated roof surfaces.
4. Apply coating when temperature is within the specified range for the specific product (consult the applicable product PDS) with no inclement weather imminent.
5. The use of brushes is recommended for delicate detail work and edges at parapets, HVAC units, stacks, skylights, penetrations, etc.
6. Sealant/mastic must be cured, clean and free of all moisture prior to application of coating.
7. Apply the coating to achieve a uniform application to achieve the desired minimum total finished dry film thickness.
8. Apply approved granules at the rate of 30-40lbs per 100 square feet to achieve the desired surface texture. When used for walkways, the granules should be used in a contrasting color so that the walkway is visible.
9. Allow the topcoat to cure prior to inspecting the finished surface. Repair any defects with appropriate RoofTite sealant/mastic and/or additional application of coating.

3.06 Clean up

Allow coating to cure before subjecting the surface to traffic. Curing conditions will vary depending on temperature and humidity levels. Consult the specific Product Data Sheets for estimated cure time.

- A. Walk the roof to ensure all tools are removed and lids, empty containers and other debris are picked up and properly disposed of.

- B. Check drains and air intake vents to ensure that they are open with no obstructions. Check roof perimeter and terminations. Make sure all terminations are properly sealed and all masking tape used for terminations, is removed.
- C. If spray equipment is used, ensure hoses are properly coiled and spray equipment is adequately cleaned as per manufacturer's instructions.
- D. When applicable, provide owner representative with instructions on accessing the roof following the coating application.

3.07 Roof Walkways

A. Scope of Work:

- 1. Walkways are to be specified at all traffic concentration points (i.e., roof hatches, access doors, rooftop ladders, etc.), and if regular maintenance (once a month or more) is necessary to service rooftop equipment.
- 2. Where applicable, a weather-resistant, breathable, resilient pad composed of synthetic rubber strands or other suitable material shall be installed to create protected surface over the coating system. Walkways shall consist of a different color to provide contrast against the coated surface.
- 3. As an option, a walkway system can be formed by an additional layer of coating and granules. A contrasting color to the coating shall be selected so that the walkway system can easily be identified.

B. Walkways Limitations & Cautions:

- 1. Factory-made walkways are considered a maintenance item and are part of the coating system.
- 2. Window washing equipment will require special maintenance. Runways or window washing tracks must be segregated and separately constructed, with approved roofing or waterproofing system. When such conditions exist, it must be reviewed by RoofTite.
- 3. Do not alter or change the location of walkways unless requested by the building owner design representative.

END OF SECTION

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This Specification represents the applicable information available at the time of its publication. Owners, Specifiers and Applicators should consult RoofTite or their Manufacturer's Representative for any information that has subsequently been made available.

ROOFTITE

Restoration Coating

Attachment I Assessment and Investigation

May 2020

Information contained in this attachment is intended for use as part of RoofTite Restoration Coating system. This attachment specifically pertains to the investigation and assessment of an existing roof surface to verify suitability for restoration. While this attachment only addresses investigation, information pertaining to substrate preparation, repairs, and cleaning are available in other attachments in this section.

GENERAL

The restoration coating is intended to enhance and extend the service life of an existing, sound and watertight roof or one that may experience occasional minor leaks. This system is not suitable for the restoration of roofs which have exceeded or are approaching the end of their service life.

1. The assessment and examination of the existing roof surface to be restored shall be performed by the RoofTite Applicator or a RoofTite representative. The assessment and examinations shall focus on the condition of the roof surface and the components to be restored.

Note: When in-depth investigation is needed to assess the entire existing roof system, a roof consultant or a qualified professional shall be attained by the building owner to conduct such investigation. The investigation shall identify all necessary system repairs prior to commencing with the restoration work.

2. If certain major repairs have been identified that required membrane removal and replacement and the addition of new insulation, such repairs must be performed with an applicator, authorized and trained on the specific roof system, and in accordance with manufacturer's requirements.
3. Moisture surveys are strongly recommended, when moisture entrapment is suspected, on roofs installed over vapor barriers, or over existing membranes and may have experienced a leak.
4. Moisture surveys may be conducted by a qualified third-party using IR Scans, Nuclear scans or by taking core cuts. Core cuts may also be taken by the RoofTite contractor and sent to a third party for moisture and adhesion analysis.
5. When test cuts are to be taken, there is a minimum of 3 cuts required per 10,000 sq. ft. of roof area with

additional cut recommended for every additional 10,000 sq. ft. of roofing.

6. Adhesion tests are required and must be coordinated in advance, to determine the extent of surface preparation/cleaning needed to ensure adequate adhesion of the coating and if priming is needed. A minimum of three adhesion tests area are required for the first 10,000 sq. ft of roof area with an additional test recommended for every additional 10,000 sq. ft. of roof surface to be restored.

Caution: On Asphaltic roofing, even when achieving acceptable adhesion/peel values, the use of RoofTite Prime-Tek Bleed Block Plus Primer is strongly recommended to prevent bleed thru and staining of coating.

Inspection and Assessment

1. This restoration coating system is not suitable for roofs with severe ponding conditions where water accumulates on the surface for periods greater than 48 hours, in areas scattered across of the roof greater than 20%. If restoration is being considered, the affected areas shall be repaired to achieve positive drainage and properly sealed. Refer to appropriate attachment for specific system repairs.
2. Granular surfaces shall be free of any loose granules. Granules that may have become loose due to surface cleaning must be removed. Aggregate (gravel) surfaces are generally not suitable for a coating.
3. Exposed and aged SPF shall be evaluated for scarifying and filling prior to coating.
4. Restoration coating of an existing Single-Ply membrane is not recommended if any of the following conditions are observed during inspection:
 - a. The membrane reinforcement scrim is visible or exposed through, in random or multiple locations of significant surface area.
 - b. The membrane is exhibiting brittleness and surface cracking is evident across the surface.
 - c. Attachment method has become unreliable or membrane damage is so excessive that tear off is more appropriate.
 - d. The membrane substrate has been weakened, unattached, or fully saturated.
5. Restoration coating of an existing metal roof system is not recommended, if any of the following conditions are observed during inspection:
 - a. Excessive rusting has compromised the structural integrity of the metal panels.
 - b. The metal panels have been deformed or fatigued. These panels shall be replaced.
6. Restoration Coating of an existing coating/finish is not recommended if any of the following conditions are observed during inspection:
 - a. The existing coating/finish has scattered and has well-advanced blistering or flaking.
 - b. Existing roofs with silicone coating can only be coated with silicone coatings. No other coatings are

suitable/compatible with the existing silicone.

- c. Existing roofs with Kynar or other fluoropolymer finishes are not compatible with other coatings and cannot be restored with this coating system.
7. Restoration Coating of an existing asphaltic/BUR surface is not recommended if any of the following conditions are observed during inspection:
 - a. The surface has become alligatored, badly weathered or separation between asphaltic plies has occurred
 - b. Cap sheets are badly weathered
 - c. Uncured asphalt emulsions, roof cements, or mastics are present

These roofs will require various repairs and the removal of any roofing cement before the restoration work. Severely deteriorated roofs or coal tar pitch roofs are not to be restored with this Restoration Coating system.

8. An inspection checklist should be prepared and secured for reference along with pictures of key locations where in-depth investigation was suggested.
9. For substrate preparation, cleaning and repairs, by the RoofTite applicator, the appropriate attachment (II thru V) shall be referenced. If necessary, the RoofTite applicator, may solicit assistance and input from the regional RoofTite representative.

End of Attachment I

ROOFTITE

Restoration Coating Attachment II Substrate Preparations – Asphaltic Roofing

May 2020

*This attachment is part of the RoofTite coating restoration system and contains specific information on the various substrate preparations required to restore existing **asphaltic roofs**.*

As a prerequisite, the existing roof surface must be inspected, as outlined in Attachment I, to determine the suitability for restoration.

A. General

Criteria contained in this Substrate Preparation Attachment is not intended for restoration of existing coal tar pitch roofs. If such projects are encountered RoofTite must be contacted for recommendations and specific application guidelines.

Note: As outlined in Part I of the Coating Restoration Specification, adhesion tests are required and must be coordinated in advance, preferably, before bidding to determine the need for surface priming, to ensure adequate adhesion of the coating. A minimum three adhesion test areas are required per 10,000 sq. ft area with an additional test area recommended for every additional 10,000 sq. ft.

Caution: Even with achieving acceptable adhesion values, the use of RoofTite Prime-Tek Bleed Block Plus Primer is strongly recommended to prevent bleed thru and staining of the coating. RoofTite BB (Bleed Block) base coat may also be used with RoofTite acrylic restoration coatings to prevent bleed thru and staining of the coating.

1. Substrate preparation contained in this attachment is intended for properly functioning roof systems to prolong and extend their service life.
2. The existing asphaltic roof must be investigated in accordance with the guidelines contained in **Attachment I** of this specification to determine if the existing roof is suitable for restoration.
3. Existing asphaltic roofs with large areas of scattered blistering or those with severe ponding conditions are not suitable for restoration as is. Such roofs must be closely examined to determine the extent of needed repairs prior to restoration, or possible replacement.

4. If moisture entrapment is suspected, and core cuts have been obtained for testing, voids in the substrate must be addressed in these areas.
5. Inspect all surfaces to be coated to ensure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.
6. When RoofTite **Acrylic** coatings are being considered for restoration, only RoofTite Seal-Tek **Acrylic** mastic can be used. Acrylic coatings are not compatible for application over silicone mastics, sealants or existing silicone coatings.
7. When RoofTite ULTRA **Silicone** coatings are being considered for restoration, the use of RoofTite Seal-Tek **Silicone** Mastic/Sealant is recommended.
8. **For additional information, the latest edition of “low slope roof manual for repairs” by NRCA may be referenced.**

B. Special Considerations

1. While it is strongly recommended to design roofs with positive drainage to prevent ponding conditions, some incidental ponding may be encountered on existing roofs due to deck deflection or changes in weather patterns.
2. Do not proceed with sealant, mastic or coating application if surface moisture is present, or if the following conditions are anticipated:
 - a. When the dew point is within 5°F of the surface temperature.
 - b. When there is a possibility of rain.
 - c. Temperatures falling below 32°F with in a 24-hour period. Refer to specific PDS for additional guidance.

C. Cleaning

1. All surfaces to be restored must be clean, sound, dry and free of any dirt, grease, oil, debris or other contaminants which would interfere with proper adhesion. Approved cleaning methods include:
 - a. Spudding/Scraping
 - b. Power brooming
 - c. Wet Vacuuming
 - d. Vacuum
 - e. Power washing
 - f. RoofTite Prime-Tek Membrane Cleaner
2. In low areas where contaminants may have settled, use a brush to ensure the surface is properly cleaned.
3. The substrate must be carefully pressure washed (2,000 psi depending on roof condition) with water. All dirt, dust, chalking, loose materials, etc. must be removed without damaging the surface. Take care not to damage the roof surface or force water into the roof system.

4. Use hot water and a mild detergent to remove grease and/or oils from the roof substrate. If mildew or algae or fungus are present, use a suitable solution to treat these areas, then pressure wash surface.
5. Rinse off the surface when detergent or cleaner is used and wash down drain according to local ordinance.

Note: Loose granules that may have shifted and accumulated should be removed and disposed of, only secured granules should remain.

D. Substrate Repairs

All wet areas must be removed and repaired prior to application of coating. All identified areas that require repairs, follow cleaning procedures outlined in paragraph C "Cleaning" to ensure the surface is properly cleaned prior to application of repair materials.

1. Any areas where BUR or MB has blistered, buckled, and is wet and/or otherwise damaged must be removed and repaired.
2. On built-up roofs with gravel, the entire roof should be spudded to achieve a relatively smooth surface. After cleaning and preparing, apply asphalt emulsion with imbedded reinforcing fabric as necessary to level off the entire surface.
3. New BUR or MB repair materials must be allowed to weather for at least 30 days and cleaned per Section C prior to application of restoration coating.
4. All areas where BUR or MB substrate surfaces is significantly crazed/cracking (gaps 1/16" or greater in width and/or depth) must be repaired with Mastic or a trowel or brushable grade mixture of Micro Fibers and coatings, to bring the substrate to a smooth workable surface.

Note: For other types of built up roofs, apply Mastic or a brush grade mixture of Micro Fibers and coating (field blended mastic) at all transitions/junctions and around skylights and curbs. Apply roller grade mixture to seams.

5. Overlay all field seams and transitional details (deck to wall junctions, curbs, skylights, penthouse, etc.) with Mastic or a roller grade mixture of Micro Fibers and coatings. The mixture shall be applied using a 4" wide 1/2" nap roller (centered over the leading edge). Refer to RoofTite applicable details for alternative seam overlayment options.
6. Around vent pipes, pitch pockets, drains and other unusual penetrations, use Mastic or a brush grade mixture of Micro Fibers and coating. The repair shall cover an area 4" in all directions.

Note: In lieu of Mastic or a brush grade mixture of RoofTite Micro Fibers and coating, use SPF to fill any gaps that may result from the removal of existing flashing material.

7. Areas where core cuts were taken, and no moisture is detected, shall be filled with RoofTite Mastic and allowed to cure 24 hours. The area should then be capped with Mastic or a trowel grade mixture of Micro Fibers and coatings or a layer of Reinforcing Fabric imbedded in two layers of coating.
8. At raised expansion joints, if necessary, seal perpendicular joints of the expansion joint cover using at least 2 layers of Reinforcing Fabric (minimum of 4" and 8" respectively) imbedded in multiple layers of coating.
9. All blisters shall be cut, dried out, re-adhered and sealed with appropriate roof mastic. Large blister (12" or greater), after allowing mastic to cure, may require an application of RoofTite Seal-Tek Reinforcing Fabric encapsulated in a base coat and a topcoat.

10. At all other locations where surface cracks or splits are evident repair using Mastic or a trowel grade

mixture of Micro Fibers and of coating or with Reinforcing Fabric imbedded in coating.

Note: The ratio of Micro Fibers and coating will vary based on high or low solid content of the coating. A RoofTite representative or the applicable tech bulletin should be consulted for mix ratio.

E. Final preparation before coating

Re-examine the roof to ensure the surface is clean and dry as described in paragraph C "Cleaning". If necessary, repeat the cleaning procedures and allow the surface to dry before coating.

1. Ensure all roof penetrations, curbs, skylights, cants, edge metal and other roof mounted equipment are in place and secure.
2. Coordinate work with building maintenance personnel to ensure that air intake units are temporarily sealed to prevent coating overspray and fumes from entering occupied spaces.
3. Confirm that all adjacent surfaces surrounding the work area are adequately protected from overspray and frequent construction traffic.
4. Apply primer if required.

F. Coating Application and Cleanup Work

Refer to part III of the Coating Restoration Specification.

End of Attachment II

ROOFTITE

Restoration Coating Attachment III Substrate Preparations – Metal Roofing

May 2020

*This attachment is part of the RoofTite coating restoration system and contains specific information on the various substrate preparations required to restore existing **metal roofs**.*

As a prerequisite, the existing roof surface must be inspected, as outlined in Attachment I, to determine their suitability for restoration.

A. General

As outlined in Part I of the Coating Restoration Specification, adhesion tests are required and must be coordinated in advance, preferably, before bidding to determine the need for surface priming, to ensure adequate adhesion of the coating. A minimum three adhesion tests are required for the first 10,000 sq. ft. area with an additional test recommended for every additional 10,000 sq. ft. Even with achieving acceptable adhesion values, the use of RoofTite Prime-Tek Epoxy Primer is strongly recommended to resist further rust.

1. Substrate preparation contained in this attachment is intended for properly functioning roof systems in order to prolong and extend its surface life.
2. The existing metal roof must be investigated in accordance with the guidelines contained in **Attachment I** of this specification to determine if the existing roof is suitable for restoration.
3. Existing metal roofs with large areas of heavy rust (greater than 20% of roof surface) or rusted through panels are generally not candidates for successful restoration. Such roofs must be closely examined to determine the extent of needed repairs and possible panel replacement.
4. When the RoofTite **Acrylic** coating is being considered for restoration, only RoofTite Seal-Tek **Acrylic** mastic can be used. Acrylic coatings are not compatible for application over silicone mastics, sealants or existing silicone coatings.
5. When the RoofTite ULTRA **Silicone** coating is being considered for restoration, the use of RoofTite Seal-Tek **Silicone** mastic/sealant is recommended.
6. Inspect surfaces which will receive the RoofTite ULTRA Silicone & RoofTite Acrylic coating to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other

contamination.

B. Special Considerations

1. Do not proceed with sealant, mastic or coating application if surface moisture is present, or if the following conditions are anticipated:
 - a. When the dew point is within 5°F of the surface temperature.
 - b. When there is a possibility of rain.
 - c. Temperatures falling below 32°F with in a 24-hour period. Refer to specific PDS for additional guidance.
2. Remove excessive amounts of asphaltic-based soft mastic, other deteriorated patching or flashing materials if present.
3. If the existing roof has been coated with Aluminized asphalt, contact RoofTite for an appropriate primer.

C. Cleaning

1. All surfaces to be restored must be clean, sound, dry and free of any dirt, grease, oil, debris or other contaminants which would interfere with proper adhesion. Approved cleaning methods include:
 - a. Brooming
 - b. Power washing
 - c. Scrapping
 - d. Sand blasting
2. In low areas where contaminants may have settled, use a soft bristled brush to ensure the surface is properly cleaned. Loose coating should be removed prior to application of coating.

D. Substrate Repairs

1. **Medium** or **heavily** rusted areas shall be wire brushed, sandblasted or mechanically abraded to remove all loose rust. Metal panels deteriorated to the point that their structural integrity is compromised shall be replaced.
2. All **lightly** rusted areas, where rust was mechanically removed, shall be primed with RoofTite Prime-Tek Epoxy Primer.
3. Check all seams to ensure that they are tight and flush. Excessive gaps or deflection between panels shall be eliminated by installing additional fasteners or rivets as necessary to limit deflection to 1/4" (6mm) or less.
4. All metal surfaces shall be cleaned with minimum 2,000 psi water to remove any existing loose paint or coating. Heavy deposits of dirt or contamination may require agitation with a stiff bristle broom. Allow the roof to dry thoroughly.
5. Fill gaps between 1/4" and 1/2" (6-13mm) at panel seams, joints and protrusions with RoofTite approved sealant or tape. Fill gaps larger than 1/2" (13mm) at the ridge cap, roof edge and/or interface of dissimilar materials with a polyethylene backer rod.

6. All mechanical fasteners shall be checked for integrity. Retighten or replace as necessary. "Stripped out" fasteners shall be replaced using a larger diameter fastener. All fasteners must be fully encapsulated with appropriate RoofTite mastic.
7. Overlay all field seams and transitional details (deck to wall junctions, curbs, skylights, penthouse, etc.) with Mastic or a roller grade mixture of Micro Fibers and coatings. The mixture shall be applied using a 4" wide 1/2" nap roller (centered over the leading edge). Refer to RoofTite applicable details for alternative seam overlayment options.
8. Around vent pipes, pitch pockets, and other unusual penetrations, use Mastic or a brush grade mixture of micro fibers and coating. The repair shall cover an area 4" in all directions.
9. Caulk or fill all cracks, holes or other surface imperfections with appropriate RoofTite sealant/mastic. All sealant/mastic must be thoroughly cured before application of coating.
10. Any new metal must be clean and oil-free. Prime ferrous metal with RoofTite Prime-Tek Epoxy at the rate of 1/2 to 3/4 gallon per 100 square feet. For non-ferrous metals, contact RoofTite.

E. Final preparation before coating

Re-examine the roof to make sure the surface is clean and dry as described in Article C "Cleaning".

1. Ensure all roof penetrations, curbs, skylights, cants, edge metal and other roof mounted equipment are in place and secure.
2. Coordinate work with building maintenance personnel to ensure that air intake units are temporarily sealed to prevent coating overspray and fumes from entering occupied spaces.
3. Confirm that all adjacent surfaces surrounding the work area are adequately protected from overspray.

F. Coating Application and Cleanup Work

Refer to part III of the Coating Restoration Specification.

End of Attachment III

ROOFTITE

Restoration Coating Attachment IV Substrate Preparations – SPF

May 2020

*This attachment is part of the RoofTite coating restoration system and contains specific information on the various substrate preparations required to restore existing **Spray Polyurethane Foam (SPF)** roofs.*

As a prerequisite, the existing roof surface must be inspected, as outlined in Attachment I, to determine their suitability for restoration.

A. General

1. Adhesion tests are required and must be coordinated in advance. This is to determine if additional surface preparation/cleaning may be needed, and to ensure adequate adhesion of the coating. A minimum of three adhesion tests are required per 10,000 sq. ft. area with an additional test recommended for every additional 10,000 sq. ft
2. The existing SPF roof must be investigated in accordance with the guidelines contained in **Attachment I**, of this specification, to determine the existing roof is suitable for restoration.
3. For additional guidance, reference:
 - a. SPFA-122- Renewal of Spray Polyurethane Foam and Coating Roof Systems for additional guidance.
 - b. ASTM D-6705- Standard Guide for Repair and Recoat of Spray Polyurethane Foam Roofing Systems
4. Existing SPF roofs, with large areas of flaking coating and scattered blisters conditions, are generally not candidates for successful restoration. Such roofs must be closely examined to determine the extent of needed repairs and/or scarfing. Any ponding areas shall be inspected and corrected for positive drainage.
5. Existing SPF roofs with silicone coatings must be repaired using RoofTite Seal-Tek Silicone Mastic/Sealant and coated with RoofTite Silicone.
6. When the RoofTite **Acrylic** coating is being considered for restoration, only RoofTite Seal-Tek **Acrylic** Mastic can be used for repairs. Acrylic coatings are not compatible for application over silicone mastics,

sealants or existing silicone coatings.

7. Inspect surfaces, which will receive the RoofTite Silicone & RoofTite Acrylic coating, to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.

B. Special Considerations

1. While it is strongly recommended to design roofs with positive drainage, to prevent ponding conditions, some incidental ponding may be encountered on existing roofs due to deck deflection or changes in weather patterns. In such cases the use of silicone coating is highly recommended due to its excellent resistance to moisture absorption.
2. Do not proceed with sealant, mastic or coating application if surface moisture is present, or if the following conditions are anticipated:
 - a. When the dew point is within 5°F of the surface temperature.
 - b. When there is a possibility of rain.
 - c. Temperatures falling below 32°F with in a 24-hour period. Refer to specific PDS for additional guidance.

C. Cleaning

1. All surfaces, to be restored, must be clean, sound, dry and free of any dirt, grease, oil, debris or other contaminants which would interfere with proper adhesion. Approved cleaning methods include:
 - a. RoofTite Prime-Tek Membrane Cleaner
 - b. Brooming
 - c. Power washing
 - d. High pressure air
2. In low areas where contaminants may have settled, use a soft bristled brush to ensure the surface is properly cleaned. Loose coating shall be removed prior to application of coating.

D. Substrate Repairs

1. Any wet areas must be removed and repaired prior to application of coating.
2. Voids created as a result of core cuts may be repaired with replacement foam cores and sealant or filled with RoofTite Mastic/Sealant and capped with RoofTite Reinforcing Fabric and Mastic. As an alternative SPF can be used to fill the voids and leveled to match the surrounding surface. An additional application of RoofTite coating is used to seal the patch.
3. Areas of exposed SPF must be brushed with stiff bristle broom to remove any degraded SPF prior to application of RoofTite restoration coating system.
4. Caulk or fill all cracks, holes or other surface imperfections with RoofTite Seal-Tek Mastic/Sealant. All mastic/sealant must be thoroughly cured before application of coating.

5. When restoring an SPF roof, start repair of large damaged and deteriorated areas by removing existing coating and SPF down to dry, good quality SPF. This requires close observation to ensure the removal operation is extended both horizontally and vertically to the point where all wet, contaminated and deteriorated SPF has been removed.
6. The damaged SPF must be removed by mechanical scarifying equipment to a minimum depth of ½” (13mm) or until good SPF is determined, whichever is greater. Removal of SPF by hand is not acceptable. These areas shall receive an extra two coats of RoofTite’s roof coating before coating the entire roof. Unless otherwise specified or required by RoofTite, coating shall be applied with multiple coats until desired thickness is required.
7. Large or deep areas of foam removal may require the application of additional foam prior to coating. Apply a minimum of ½” (13mm) new SPF. Do not remove an area larger than can be re-foamed and base coated in the same day. New SPF must be of same density as existing foam.

Caution: Use of low-pressure froth packs is generally not acceptable

8. Reseal around all mechanical equipment and roof penetrations with appropriate RoofTite Seal-Tek sealant.

E. Final preparation before coating

1. Re-examine the roof to make sure the surface is clean and dry as described in Article C “Cleaning”.
2. Ensure all roof penetrations, curbs, skylights, cants, edge metal and other roof mounted equipment are in place and secure.
3. Coordinate work with building maintenance personnel to ensure that air intake units are temporarily sealed to prevent coating overspray and fumes from entering occupied spaces.
4. Confirm that all adjacent surfaces surrounding the work area are adequately protected from overspray and frequent construction traffic.

F. Coating Application and Cleanup Work

Refer to part III of the Coating Restoration Specification.

End of Attachment IV

ROOFTITE

Restoration Coating Attachment V Substrate Preparations – EPDM, TPO & PVC May 2020

*This attachment is part of the RoofTite coating restoration system and contains specific information on the various substrate preparations required to restore existing **Single Ply roofs**.*

As a prerequisite, the existing roof surface must be inspected, as outlined in Attachment I, to determine their suitability for restoration.

A. General

Substrate preparation contained in this attachment is intended for properly functioning roof systems to prolong and extend their service life.

The existing single-ply roof must be investigated in accordance with the guidelines contained in **Attachment I** of this specification to determine if the existing roof is suitable for restoration.

1. Adhesion tests are required and must be coordinated in advance, to determine if additional surface preparation/cleaning may be needed, and to ensure adequate adhesion of the coating. A minimum of three adhesion tests are required per 10,000 sq. ft. area with an additional test area recommended for every additional 10,000 sq. ft.
 - a. Aged or new EPDM must be cleaned using RoofTite Prime-Tek Membrane Cleaner and power washed.
 - b. Aged TPO must be cleaned using RoofTite Prime-Tek Membrane Cleaner, power washed and then primed with RoofTite Prime-Tek TPO II primer.
 - c. New TPO must be primed with RoofTite Prime-Tek TPO primer.
 - d. Aged PVC/KEE membrane must be cleaned using RoofTite Prime-Tek Membrane Cleaner, power washed and then primed with RoofTite Prime-Tek Epoxy primer. Primer is only required when using RoofTite Acrylic coatings.

Note: Contact RoofTite for additional cleaning and primer recommendations

2. Existing single ply roofs with large areas of delamination, those with severe ponding conditions or those with large areas of wind damage are not candidates for restoration. Such roofs must be closely examined to determine the extent of needed repairs, or possible replacement.
3. Projects where the membrane has crazed and cracked in areas greater than 20% of the roof should be assessed and membrane replaced as necessary.
4. When the RoofTite **Acrylic** coating is being considered for restoration, only RoofTite Seal-Tek **Acrylic** Mastic can be used for repairs. Acrylic coatings are not compatible for application over silicone mastics, sealants or existing silicone coatings.
5. When RoofTite **Silicone** coating is being considered for restoration, the use of RoofTite Seal-Tek **Silicone** Mastic/Sealant is recommended.
6. Inspect surfaces which will receive the RoofTite Silicone or RoofTite Acrylic coating to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.

B. Special Considerations

1. While it is strongly recommended to design roofs with positive drainage to prevent ponding conditions, some incidental ponding may be encountered on existing roofs due to deck deflection or inadequate roof drainage. If ponding remains after 48 hours tapered insulation or spray polyurethane foam (SPF) should be used to achieve positive drainage, refer to article D "Substrate Repairs".
2. Do not proceed with sealant, mastic or coating application if surface moisture is present, or if the following conditions are anticipated:
 - a. When the dew point is within 5°F of the surface temperature.
 - b. When there is a possibility of rain.
 - c. Temperatures falling below 32°F with in a 24-hour period. Refer to specific PDS for additional guidance.

C. Cleaning

1. All surfaces to be restored must be clean, sound, dry and free of any dirt, grease, oil, debris or other contaminants which would interfere with proper adhesion. Approved cleaning methods include:
 - a. RoofTite Prime-Tek Membrane Cleaner
 - b. Brooming
 - c. Power washing – a minimum working pressure of 2,000 psi is to be used.
2. Aged or new EPDM must be cleaned using RoofTite Prime-Tek Membrane Cleaner and power washed.
3. Aged TPO must be cleaned using RoofTite Prime-Tek Membrane Cleaner, power washed and then primed with RoofTite Prime-Tek TPO II primer.
4. New TPO must be primed with RoofTite Prime-Tek TPO II primer.
5. Aged PVC/KEE membrane must be cleaned using RoofTite Prime-Tek Membrane Cleaner, power washed

and then primed with RoofTite Prime-Tek Epoxy primer. Primer is only needed when using RoofTite Acrylic coatings.

Note: For cleaning/priming new PVC membrane, RoofTite must be contacted for applicable requirements.

6. In low areas where contaminants may have settled, use a stiff bristled brush to ensure the surface is properly cleaned.
7. Care should be taken not to damage the roof surface or inject water into the substrate during washing.
8. Allow at least 48 hours for complete drying after the cleaning process.

D. Substrate Repairs

Prior to substrate preparation and repairs to receive the restoration coating, ensure that areas with extensive repairs (removal and replacement of wet areas, overlayment of open seams, replacement of delaminated areas, deteriorated flashing, etc.), are completed and the roof has been restored to a watertight condition.

1. At field seams that have not been repaired for the purpose of this restoration work:
 - a. Cut and remove fish mouths and loose membrane. The areas shall be filled with mastic and allowed to cure.
 - b. Partially delaminated seams with delamination of 1" or less will require the removal of loose membrane and the use of mastic/sealant to fill the void.
 - c. Overlay the seams with 4-6" wide section, centered over the seam, of Reinforcing Fabric imbedded in the base coat and encapsulated in the topcoat. Refer to RoofTite spec details for additional options.
2. At penetrations, field fabricated pipes, scuppers, sealant pockets, and inside and outside corners, where uncured flashing may have been used:
 - a. Encapsulate uncured flashing with Mastic or a brush grade mixture of Micro Fibers and coating, extending the application onto the deck membrane approximately 2-4" beyond the existing flashing.
 - b. As an alternative use Reinforcing Fabric imbedded in the base coat and covered with the topcoat. The fabric must also extend horizontally 2-4" on the deck membrane beyond the existing flashing.
3. Small punctures and small tears (3" or less) shall be repaired using one of the following:
 - a. After priming/reactivating with a compatible pressure sensitive overlay extending 2" in all directions. For EPDM and TPO membranes, EPDM overlay may be used. For PVC and KEE membranes PVC pressure sensitive cover strip may be used.
 - b. Use RoofTite Primer and Mastic/Sealant to cover puncture areas and Reinforcing Fabric imbedded in a base coat and covered with a top coat to seal the membrane. The repair area must extend a minimum of 2" in all directions.
 - c. Use Mastic or a trowel grade mixture of Micro Fiber and coating to cover punctures or tears, extending 2" beyond the damaged area.
4. At metal edging where, flashing overlay has been used, overlay the junction of the flashing on the deck side with Reinforcing Fabric (similar to field seams) centered over the splice edge and imbedded in the base coat. Use RoofTite Mastic/Sealant along the edge of the overlay facing the meal edge to totally encapsulate the edge of the overlay. When applicable, prime the metal with the appropriate primer

before applying the mastic. The entire overlay and Reinforcing Fabric must be covered with a final topcoat.

5. At sealant pockets, after cleaning the penetration, apply generous amount of RoofTite Mastic/Sealant to encapsulate existing sealant extending the mastic up the penetration approximately 1-2"
6. All expansion joints located at deck level where the membrane is used as an expansion joint cover must be overlaid with 2 layers of Reinforcing Fabric imbedded into 2 applications of base coat and covered with one topcoat. The first layer Reinforcing Fabric must extend 4" beyond the single ply flashing and the second layer must also extend 4" beyond the first layer.
7. Flashing details must be examined for loose or deteriorated flashing, cuts, tears and open inside or outside corners. Membrane and flashing terminations should be examined at perimeters, roof penetrations and drains to ensure watertight performance. Deficient terminations should be corrected in accordance with the appropriate Carlisle published detail.
8. Minor crazing, cracking, tears or punctures may be repaired using applicable single ply technology for the specific membrane type.

Note: On TPO projects, repairs can be accomplished using either pressure sensitive EPDM or TPO where possible.

E. Final preparation before coating

Re-examine the roof to ensure the surface is clean and dry as described in Article C "Cleaning". If necessary, repeat the cleaning procedures and allow the surface to dry before coating.

1. Ensure all roof penetrations, curbs, skylights, edge metal and other roof mounted equipment are in place and secure.
2. Coordinate work with building maintenance personnel to ensure that air intake units are temporarily sealed to prevent coating overspray and fumes from entering occupied spaces.
3. Confirm that all adjacent surfaces surrounding the work area are adequately protected from overspray and frequent construction traffic.
4. Apply primer if required.

F. Coating Application and Cleanup Work

Refer to part III of the Coating Restoration Specification.

End of Attachment V

ROOF TITE

Restoration Coating Details

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