SECTION 07 72 00 ROOF ACCESSORIES

APOC GUIDE SPECIFICATION
DIVISION 7 – THERMAL AND MOISTURE PROTECTION

PART I – GENERAL

1.01 WORK INCLUDED

A. Provide all labor, material and equipment necessary to apply the RoofSlope® auxiliary sloping compound over the affected roof membrane area that is experiencing ponding water. RoofSlope® is a patented, proprietary blend of high-performance acrylics, aggregates and bonding agents.
B. The RoofSlope® product is a stand-alone auxiliary sloping compound that can be installed over a variety of roofing membranes that are experiencing ponding water.
C. Conduct work as specified herein.

1.02 RELATED SECTIONS

A. Specified elsewhere:
    1. Section 07 01 70 Operation of Maintenance of Roof Specialties and Accessories
    2. Section 07 01 50 Elastomeric Roof Repair and Restoration
    3. Section 09 97 26 Cementitious Coatings
B. References:
    1. American Society for Testing and Materials (ASTM)
C. Notes to Users of this Document (e.g., Architects, Engineers, Designers and Consulting Professionals):
    1. This specification is supplied in an exhaustive format with the intent of achieving as comprehensive inclusion of project factors as possible.
    2. The specifier is NOT obligated to utilize this specification in entirety, but instead is encouraged to adopt/adapt/apply those provisions which are applicable to specific projects.
    3. ICP Group has prepared this overall specification. Users of this specification are strongly encouraged to engage ICP's resources and industry expertise in customizing this specification:

i Web: https://www.icpgroup.com/programs/masterworks/
ii Email: specifications@icpgroup.com
iii Phone: 800-342-3755 x 2241

4. All construction projects are unique. Ultimately, it is the responsibility of the involved parties (e.g., Installer/Applicator, Remediator/Restorer, General Contractor, Owner, Client, Enforcement Authority, Architect, Engineer or Consultant) to verify on a case-by-case basis that applications of this specification are appropriate.
5. Deviation: Certain projects will involve unavoidable circumstances that prevent project execution in full accord with industry professional standards of care, and the tenets of this specification. A separate and specific specification should be developed in consultation with all parties, including product manufacturers, when deviation the only option for achievement of the objectives of the property owner.
6. Where contradicted by federal, state or local laws and regulations, any of the preceding supplant the information in this document.

1.03 QUALITY ASSURANCE

A. Cited Standards are incorporated herein by reference and govern the work:
    1. Compressive Strength (ASTM C 150-72)
    2. Abrasion Resistance (ASTM D 1242)
    3. Bond Strength (ASTM C 297)
    4. Freeze-Thaw Cycling (ASTM C 67)
    5. Static Coefficient of Friction (ASTM D 635)
    6. Spread of Flame (ASTM E 108)
    7. Intermittent Flame (ASTM E 108)
    8. Burning Brand (ASTM E 108)
B. Substrates: Systems approved and specified herein should be applied over the following:
    1. Variety of granulated roof surfaces contact APOC for a list of approved granulated surfaces.
    2. Single-ply roofing such as PVC, TPO, and EPDM, contact APOC for written details.
    3. Various existing affected roof membranes contact APOC for a list of approved roof membranes.

C. Single Source Responsibility: Obtain all product system components from a single manufacturer with not less than 20 years of successful experience in manufacturing and specifying installation of the principal materials described in this specification. Provide secondary/supplementary materials only of type and from a source recommended by the manufacturer of the primary material(s).
D. Contractor Experience: The installer shall be a firm or individual experienced with the objectives of this specification.
E. Sampling of Material:
    1. When directed by Architect/Engineer, obtain test samples from material stored at the project site or source of supply (distributor or manufacturer).

1.04 SUBMITTALS
(as directed to Owner, Client, Enforcement Authority, Assessor, Architect, Engineer or Consultant)

A. Submit electronically product information including technical data, labels and warranty (if applicable).
B. Submit electronically Manufacturer's Safety Data Sheets (SDS).
C. Notes:
    1. Bidders are encouraged to submit materials that meet the Basis of Design. In order to have a material accepted as Approved for the work outlined herein the alternate or substitute proposed must be received by the architect for evaluation and approval no less than 21 days prior to the original published bid date. Approved alternate products will be by Addendum only. Submittals circumventing this process will not be approved and will not be acceptable for inclusion in this project.
    2. Substitutions will only be considered for products manufactured by companies of primarily U.S. or Canadian ownership

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and product number.
B. Storage of materials:
    1. Store only acceptable project materials on site.

2. Store in suitable and secured location convenient to progress of work.
3. Comply with health and fire regulations. No products listed in the Basis of Design are flammable or combustible.
4. Storage temperature shall be between 40° F (4.5 C) and 110° F (43 C), or such other ambient temperature conditions as may be specifically recommended by product manufacturer.
5. Products shall not be permitted to freeze on site, and delivery should be refused if freezing during transit is probable.
6. Avoid storage directly in hot sun exposures or excessive temperatures and protected from weather and other damages.
7. All materials shall be stored in a dry location.
8. Keep containers tightly closed when not in use.
9. Store securely closed and upright in original container. Lids or caps can leak if containers are placed on side.
10. Keep out of reach of children.

C. Handling:
1. Dispose of materials in accordance with requirements of local authorities having jurisdiction.
2. Verify that products are within acceptable shelf life, and do not utilize any product that is older than the maximum shelf life stated by the manufacturer.

1.06 JOBSITE CONDITIONS

A. Environmental requirements:
1. Comply with manufacturer's recommendations as to environmental conditions under which all chemicals and coatings can be applied.
    a. Temperature: Do not apply products at temperatures beyond limits stated in the manufacturer's technical data sheet unless given written permission by the manufacturer.
        i. At Application: The ambient air and surface temperature shall be a minimum of 10°C (50°F) and a maximum of 43°C (110°F) and shall remain so until RoofSlope® compound is fully cured.
2. Surface/Substrate Moisture:

a. Consult manufacturer regarding whether topical dampness (latent moisture tangible by touch) after wet cleaning or recent precipitation is acceptable at time of application of RoofSlope®, or if a completely dry (absence of above-normal topical and subsurface moisture) surface is required. Applicators are expected to account for slow-drying surface elements.

B. Surface Protection/Prevention of Cross-Contamination:
   1. Cover or otherwise protect adjacent areas. Identify adjacent areas which could be cross contaminated by construction activity.
   2. Careful attention should be paid to any occupied areas in the vicinity of the work area.
   3. Utilize adequate engineering controls to ensure worker and occupant safety and health and prevent cross-contamination. Engineering controls may include, but are not limited to, source containment, isolation barriers, pressure differentials, dust suppression, and high efficiency particulate air (HEPA) vacuuming and filtration.

C. Provide adequate illumination and ventilation.

D. The applicator shall have access to electrical power, clean potable water and clean work area at the location where the materials are to be applied.

E. The RoofSlope® compound must be protected by permanent or temporary means from weather and other damage, before, during, and immediately after application.

F. The materials shall be protected from weather and other trades which may damage the integrity of the product.

PART II – PRODUCTS

2.01 MATERIALS (Basis of Design)

A. APOC or its authorized distributors shall supply all products.

B. Substitutions or additions of other materials will void the warranty.

C. Components:
   1. RoofSlope®: A proprietary blend of polymer cement
      a. To be combined with clean and potable water.

D. Materials
   1. Water: Shall be clean and potable.

2. Granules: 16 grit Silica Sand or Roofing granules (clean wash sand, grit, or granules like a 16 grit/mesh is acceptable).

2.02 MIXING

1. Pour 4.75L (1.25 gallons) water into a clean 19L (5 gallon) plastic container.
2. Add one (50lb.) bag or (50lb.) pail of RoofSlope® Dry Mix and mix thoroughly for 3 to 4 minutes.
3. Use a Wind-lock B-M1 mixing blade, or equivalent, powered by a 13mm (1/2 inch) variable speed drill, capable of producing 1000 RPMs

PART III – EXECUTION

3.01 EXAMINATION

A. Installers should conduct an initial inspection before commencing work regardless of prior evaluations by other parties.
B. When preceding evaluations indicate that unacceptable conditions exist, an assessment should be performed prior to starting work.

3.02 PREPARATION OF WORKSITE, SURFACES

A. WORKSITE PREPARATION
    1. The first responsibility of the installer upon arrival to site of is to ensure the safety of workers and occupants.
    2. Coordinate commencement of work with owner so as not to cause inconvenience to the facility.
    3. Post notices in conspicuous areas multiple days in advance of beginning work on specified phase (as agreed to with Owner or Owner's agent), noting start date, any instructions to occupants and business phone number. Utilize signage as recommended or required by local ordinance and industry standard.
B. HAZARDOUS MATERIALS IN STRUCTURES:
    1. There are many hazardous materials which can be present in older structures where installers perform work. Common hazards can include, but are not limited to, asbestos, lead, mercury, mold and PCBs.
    2. Determination as to whether these or other potentially hazardous materials are present, may have been

conducted by a consulting professional, certified industrial hygienist or other IEP. The installer should ask about whether such an evaluation was conducted, and what potentially hazardous materials were identified, if any. The contractor should not assume that hazardous materials are not present.

3. Lead: Even when building age suggests that lead paint is unlikely to be present, the owner or owner's agent should be consulted to verify. Use of lead-based paint was not banned for residential use in the United States until 1978, but other uses of lead continue to present day.
4. Asbestos: Even when building age suggests that asbestos is unlikely to be present, the owner or owner's agent should be consulted to verify. Use of asbestos in the United States declined significantly in the United States and Canada during the 1980s but import and uses of asbestos-containing construction products continues to present day.
5. Abatement or disturbance of asbestos or lead typically require contracting firms, supervisors and workers to have a state-issued license. License types and requirements vary, and the restoration firm or professional should contact the pertinent agency in the state where the site is located to ascertain minimum training and licensing requirements.

C. EXAMINATION:

1. Before any work is started, the RoofSlope® applicator shall thoroughly examine all surfaces for any deficiencies. Where deficiencies exist, the Architect, Owner, or Contractor shall be notified in writing and corrections made.
2. Conditions of Substrate:
    a. The substrate must be structurally sound and free from contaminants.
    b. Ensure the assembly can accommodate the weight of the RoofSlope® compound.
        i. Refer to RoofSlope® application instructions RS-120 for product weight chart.
    c. Existing roofing system shall function properly and have a granulated surface, if the surface is not granulated, contact APOC for details.

d. Ensure that all low spots are clearly marked and confirm that constraints are not present that would prohibit RoofSlope® from being installed at the necessary heights as to achieve proper slope.

3.03 GENERAL SURFACE PREPARATION INSTRUCTIONS FOR ALL SUBSTRATES

A. SURFACE PREPARATION: (Note all surfaces must be clean and free from contaminants.)
    1. Mineral Surface/Granulated Roof Membrane:
        a. Puddles may not be on the surface. Broom any puddles off the substrate to be coated.
    2. Acrylic and Urethane Painted Roof Coatings:
        a. Puddles may not be on the surface. Broom any puddles off the substrate to be coated.
    3. Single-Ply Membranes:
        a. Puddles may not be n the surface. Broom any puddles off the surface to be coated.
        b. Roofing membranes that are single-ply, such as a PVC, TPO, or EPDM requires a thin layer of a compatible single-ply adhesive to be used as a primer for RoofSlope®.
        c. Apply a single-ply adhesive that will adhere to the existing membrane as a primer thick enough to accept a full broadcast of 16 grit silica sand or granules.
        d. IMMEDIATELY broadcast silica sand or granules into the wet single-ply adhesive until refusal. Allow the single-ply adhesive to properly cure prior to the installation of RoofSlope®.
    4. Concrete & More:
        a. Contact APOC for additional information

3.04 APPLICATION

A. SLOPING BETWEEN SCUPPER OR DRAINS:
    1. Determine a high point between the scuppers or drains and screed the RoofSlope® using a screed board down to each scupper or drain. Transition to the mineral surfaced roofing membrane should be tapered to zero.
    2. Immediately broadcast evenly approximately 20 pounds (per batch mix) of 16 grit silica sand or roofing granules into wet/uncured slope mix until refusal. THIS

APPLICATION IS IMPERATIVE FOR PROPER CURE AND PERFORMANCE.

B. SLOPING LARGE AREAS:
    1. Pour RoofSlope® mix over the surface and spread it out using a screed board set to the appropriate slope and length. A shim or nail on one end of the screed board can be utilized to create the desired slope.
    2. Immediately broadcast evenly approximately 20 pounds (per batch mix) of 16 grit silica sand or roofing granules into wet/uncured slope mix until refusal. THIS APPLICATION IS IMPERATIVE FOR PROPER CURE AND PERFORMANCE.
C. FILLING LOW SPOTS:
    1. Pour RoofSlope® mix into the middle of the low spot (the material should be mixed wet enough to allow material to self-level).
    2. Using a screed board, pull the board across the low spot, leaving excess RoofSlope® mix in the low spot of the substrate, and taper the edges of the perimeter.
    3. Once the low spot has been filled in, evenly broadcast 16 grit silica sand or roofing granules into the wet/uncured slope mix until refusal.

3.05 CLEANING

A. Remove remaining debris promptly from work area and dispose of properly.
B. Remove spilled, splashed, or splattered coating materials from all surfaces.
C. Do not mar surface finish of items being cleaned.
D. Cleanup tools and other equipment with warm, soapy water before coating dries.
E. Review product labels for proper disposal of unused product and empty containers.

3.06 SLIP AND FALL PRECAUTION

A. OSHA, American Disabilities Act (ADA), and The Federal Housing Act (FHA) have now set enforceable standards for slip-resistance on pedestrian surfaces. APOC recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily/greasy, or otherwise potentially slippery conditions. It is the end user's responsibility to provide a

flooring system that meets current safety standards. APOC or its sales agents will not be responsible for injury incurred in a slip and fall accident. Please consult local building codes for the current coefficient of friction requirement.

3.07 WARRANTY

A. Installer shall provide Owner, through Assessor, Architect/Engineer, with an acceptable form of warranty against defects in workmanship for a period of one (1) year from date of substantial completion.
B. Issuance of manufacturer warranty shall not be a condition precedent to extension to manufacturer an opportunity to inspect, and/or documentation of installer procedures during remediation. Manufacturer must sign warranty for document to be valid.
C. Extent of warranty shall be limited to the repair or replacement of defective surfaces at no cost to the Owner, and for any damage directly resulting from such defects during the warranty period of 10 years. The warranty shall not include any remedy for repair labor, or for defects caused by abuse, improper maintenance or operation, or by normal wear, tear and usage. Contact the manufacturer for the entire warranty. This section is informative only and does not constitute a warranty.

END OF SECTION