

INSTALLATION INSTRUCTIONS

ALSAN® COATING AC 401 INSTALLATION INSTRUCTIONS

ALSAN COATING AC 401

ALSAN Coating AC 401 is a water based VOC compliant, plasticizer free, single component, acrylic roof coating and protective barrier used on a variety of low slope roof surfaces and substrates. Upon cure ALSAN Coating AC 401 forms a durable weatherproof coating that is highly resistant to degradation from UV rays, natural weathering and may be applied as a relective coating over clean, sound, and dry single ply, modified bitumen, BUR, metal roofing and/or other approved existing coatings.

ALSAN Coating AC 401 can be applied up to 24 mils thick in one application using single component airless spray equipment, roller or brush; spray application providing the best economy for labor and installation. This guide discusses basic techniques, environmental conditions, safety considerations, and limitations for the application of ALSAN Coating AC 401 and components.

HEALTH & SAFETY CONSIDERATIONS

The contractor shall ensure compliance with OSHA, EPA and other local governing authorities for project related safety and environmental requirements. Prior to application, persons handling or applying ALSAN Coating AC 401 or components should familiarize themselves with the applicable Product Data Sheets (PDS), material Safety Data Sheets (SDS), specifications, and recommended application guidelines. Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with specified exposure limits where required. The applicator is responsible for ensuring conditions are appropriate to proceed and proper application methods are followed.

Personal Protective Equipment (PPE)

- Fabric suit
- Impervious gloves
- Safety glasses

When applying ALSAN Coating AC 401 or components, exposure levels typically will be below OSHA permissible limits for most outdoor spray applications. When required air monitoring should be performed by a qualified person to identify any hazards. If respiratory protection is required, use a NIOSH approved air-purifying respirator.

STORAGE & HANDLING

Containers should be left unopened until ready for use. Store material between 55°F (12.7°C) and 80°F (26.7°C) for optimum shelf life. Storage outside of recommended guidelines for an extended period of time could affect performance of the material.

ENVIRONMENTAL CONSIDERATIONS

Environmental conditions such as temperature, dew point, humidity, precipitation, sun, cloud cover, wind, and shade can affect application of ALSAN Coating AC 401 and components. Monitor and confirm all environmental conditions are satisfactory to begin work and remain so during installation of the specified components and materials. Do not apply ALSAN Coating AC 401 or components during or with the possibility of precipitation, fog, dew, condensation, frost, with 90% relative humidity (RH) or above, or with possibility temperatures could fall below 32°F (0°C) within 24 hours of application. Generally, application of ALSAN Coating AC 401 coating and components may proceed while air temperature is between 50°F (10°C) and 95°F (35°C) providing the substrate is a minimum of 5°F (3°C) above the dew point temperature, clean and dry.

For spray application of ALSAN Coating AC 401, material should be conditioned and maintained at 65°F (18.3°C) or above and applied with an ambient temperature between 50°F (10°C) and 95°F (35°C) providing relative humidity (RH) is 90% or below and substrate is a minimum of 5°F (3°C) above the dew point temperature, clean and dry.

STIRRING

Separation will occur when ALSAN Coating AC 401 and components are stored for extended periods of time. Thoroughly stir the ALSAN Coating AC 401 or component with a low-speed mechanical mixer for approximately 5 minutes or until a uniform consistency is achieved upon opening container.

SUBSTRATE PREPARATION

The prepared substrate bonding surface must be clean, free of any voids, oxidation, oils, wax, other release agents that may interfere with adhesion and standing water. For spray applications, use precautions and protect all surfaces that are not to be coated. Mask off sensitive areas such as windows

INSTALLATION INSTRUCTIONS

ALSAN® COATING AC 401 INSTALLATION INSTRUCTIONS

or equipment, and provide protective screening as needed to prevent overspray. For EPDM roofing and other substrates with hard-to-remove oil, grease or other stubborn contaminants apply ALSAN All-Purpose Cleaner as a pre-treatment. Using a stiff bristle brush/broom scrub as necessary to dissolve and lift contaminants from the substrates. Where required, remove all mold, mildew, fungus and other biological growth using 3:1 bleach solution, or other applicable cleaning products. Following any pre-treatment or cleaning, pressure wash (1,500 psi or more using a wide fan tip) all roof and flashing surfaces with clean water taking care to prevent damage to in place existing materials. Thoroughly clean and remove residue, dirt, debris, biological growth, surface chalking, and all other materials that may inhibit adhesion of the ALSAN Coating AC 401, components and accessories. Ensure work area is thoroughly dry before applying any ALSAN Coating AC 401 materials.

SELECTING SPRAY EQUIPMENT

Airless spray equipment used to apply ALSAN Coating AC 401 and components can dramatically increase production. ALSAN Coating AC 401 may be applied using single component spray equipment meeting the following criteria:

PUMP FLUID TO AIR RATIO	MINIMUM PUMP PRESSURE PSI (BAR)	OUTPUT GALLON (L) /MINUTE	SPRAY GUN PSI (BAR)
30:1	3000 (206.8)	2.5 (9.46) CONTINUOUS	3000 (210) REVERSIBLE TIP CLEANING

MINIMUM TIP ORIFICE IN (MM)	TIP FAN ANGLE	MIN. HOSE ID IN (MM)	MAXIMUM HOSE LENGTH
0.027 - 0.039 (0.68 - 0.99)	40° - 50°	3/8 (9.5) 1/2 (12.7) 3/4 (19.0)	UP TO 75 FEET (22.8 M) UP TO 200 FEET (60.9 M) OVER 200 FEET (60.9 M)

Note: For optimal application and improved production in spray applications, ALSAN Coating AC 401 should be pre-condition and maintain at or above the minimum recommended temperature with appropriate drum type or hopper heaters for spray applications. Hose and fittings should be compatible with coating and cleaning materials, with pressure ratings higher than the maximum output pump pressure. When required, a 3/8 in (9.5 mm) minimum ID x 6

foot (1.8 m) long whip hose between the gun and main hose may be used to create a flexible connection and reduce strain while spraying.

Please consult the spray equipment manufacturer for their recommendations and application guidelines. SOPREMA recommends referring to the equipment manufacturer for appropriate use and maintenance of all spray equipment and accessories. Contractor must use his or her own knowledge, experience and judgement when selection equipment and accessories for application of ALSAN Coating AC 401 components and all SOPREMA products. Be certain that the spray equipment is properly maintained and operated in accordance with the equipment manufacturer's instructions.

SPRAY EQUIPMENT STARTUP & PRECAUTIONS

Before start up, ensure that all equipment is clean prior to use. Carefully read and follow the equipment manufacturer's operating and safety instructions and familiarize yourself with equipment features. Ensure that all components and accessories have a capacity and pressure rating meeting the pump manufacturer's specifications. Insert siphon hose/immersion tube into supply drum bung and seal around hose/tube with plastic or other acceptable material to reduce exposure to air. When required, apply band type drum heater to maintain product temperature during application. Select a test area and begin to spray. Pressure directly affects the spray pattern and typically requires adjustment to match field conditions. Set the pressure so that the gun provides a clean spray pattern about 16 in (406 mm) wide at the point of contact with the substrate when sprayed from a distance of 12 to 24 in (305 to 610 mm).

Keep observers and all non-essential personnel away from the spray area. Be certain not to spray near or over open energized electrical circuits. Turn off all air intakes within 100 ft (30.5 mm) of spraying. During some conditions, a greater distance may be required. If air intakes cannot be shut off, charcoal filters may reduce or help control interior odors. In order to eliminate overspray on nearby surfaces and objects, a fully enclosed windscreen should be used.

PRIMER APPLICATION

In most applications priming is recommended with ALSAN Coating AC 401 materials. However, certain substrates may not require priming to prevent bleed through or ensure adequate long-term bond of ALSAN Coating AC 401. Adhesion should be confirmed by the applicator for all substrates prior to startup of work. Perform an adhesion test on each type of surface or material to determine the required surface preparation, if adequate bond can be achieved, and if a primer is required. When required, the following primers may be applied using single component airless spray equipment (preferred), 1-3/4 in nap roller or synthetic filament brush:

INSTALLATION INSTRUCTIONS

ALSAN® COATING AC 401 INSTALLATION INSTRUCTIONS

SUBSTRATE	PRIMER	COVERAGE RATE GAL/100 FT ² (L/M ²)	WFT MILS (MM)	DFT MILS (MM)
ASPHALT, BUR & MODIFIED BITUMEN	ALSAN COATING BLEED BLOCKING PRIMER	1.0 (0.41)	16 (0.41)	8.8 (0.22)
METALS	ALSAN COATING RUST INHIBITIVE PRIMER	0.5 (0.20)	8 (0.20)	3.28 (0.08)
EPDM	ALSAN COATING EPDM PRIMER	0.5 (0.20)	8 (0.20)	4 (0.10)
PVC, CSPE (HYPALON)	ALSAN COATING SINGLE PLY PRIMER	1.0 (0.41)	16 (0.40)	7.2 (0.18)

ALSAN Coating Primers are water based and must be protected from freezing during transit, handling, storage, and installation. Low temperatures and high humidity will slow the evaporation and curing process. Primers typically should not be applied over wet substrates, when ambient temperature is below 50°F (10°C) or could fall below 32°F (0°C) within 24 hours of application, or when precipitation or dew is likely to occur within 6 hours of application and/or before the primer dries. ALSAN Coating Primers must be top coated within 24 hours of application to ensure proper coating practices. Prior to application, refer to individual published primer product data sheets, specifications, guidelines and recommendations for complete application instructions. The applicator is responsible for ensuring conditions are appropriate to proceed with proper application methods. When required and for substrates not listed above, consult SOPREMA for an appropriate primer.

FIELD APPLICATION

Ambient and substrate temperature must be 50°F (10°C) or above during application of ALSAN Coating AC 401 materials and until dry. For spray application of ALSAN Coating AC 401, material should be conditioned and maintained at 65°F (18°C) or above using appropriate band type drum heaters designed for 55 gallon (208 liters) drums.

ALSAN Coating AC 401 should be applied using single component airless spray equipment (preferred), 1-1/4 in (32 mm) nap rollers, or synthetic filament brushes (touch up only) per the application coverage rate and recommended mil thicknesses.

Note: At steep slopes 2:12 or greater application may require multiple thin coats to achieve the desired mil thickness.

WARRANTY REQUIREMENTS		
SUBSTRATE	REQUIRED WFT/DFT	
	5 YEAR	10 YEAR
METAL	32/17	48/25*
ASPHALT BUR, MODIFIED BITUMEN	32/17	48/25
SINGLE PLY (EPDM, PVC, CSPE, TPO)	32/17	48/25

* Requires reinforced flashings

FLASHINGS, LAPS, SEAMS JOINTS & FASTENERS

Refer to project specifications and detail drawings for flashing specific conditions. Before applying field coating, ensure all roof transitions, penetration flashings, laps, seams, joints, and fasteners are prepared as specified. Install flashings using ALSAN Coating AC 401 Flashing grade or ALSAN Coating SIL 401 at specified rates, coats, mil thickness with ALSAN Coating Butyl Fleece Tape and/or polyfleece as recommended. Generally, all flashing terminations should be 8 in (200 mm) minimum vertical height wherever possible or completely cover existing flashings where applicable. Flashing height shall be at least as high as the potential water level that could be reached as a result of a deluging rain and/or poor slope. Do not flash over existing through-wall flashings, weep holes and overflow scuppers. All flashing shall be terminated and counter flashed in accordance with industry-accepted practice.

SPRAY APPLICATION RECOMMENDATIONS

For spray applications, filter screens should be 30 mesh or larger if used. Adjust tip size depending upon conditions. Pump pressure, hose length, air temperature, and material temperature can affect the spray pattern. If the spray pattern is pulsating or is fingering, reduce the size of the tip orifice. This will decrease the material delivery volume and increase the pressure. To reduce applicator fatigue, install a wand extension at the gun with a 45° elbow at the tip.

ALSAN Coating AC 401 may be applied in single or multi-coat applications. When ALSAN Coating AC 401 is applied in two coats, the second coat should be applied perpendicular to first coat. With spray applications, roof coatings should be applied by roller at roof edges and penetrations to provide clean straight edges and prevent overspray. Additional roof coating should be applied at seams, laps and joints.

INSTALLATION INSTRUCTIONS

ALSAN® COATING AC 401 INSTALLATION INSTRUCTIONS

Typically, two coat applications are recommended to minimize and/or eliminate possibility of "pinholes". Ensure that the ALSAN Coating AC 401 forms a continuous, void and pinhole-free membrane. Repair any voids or pinholes as necessary. Verify application of all coats using a wet mil gauge during the application.

When spraying, keep the spray gun perpendicular to the substrate using overlap spray patterns to ensure uniform coverage free from pinholes. In multi-coat applications and with repairs, for best results, apply additional coats as soon as the first coat is fully dry.

SPRAY TECHNIQUE

While spraying, the tip should be 12 to 24 in (300 to 600 mm) above the substrate while moving at a rate to produce the desired coating thickness. Use a half-lap technique, where each spray pass is overlapped 50% for a uniform coverage ensuring no thin spots or "holidays" are present. On steep slope or vertical surfaces, ensure the material is not applied too thick as to cause runs or sags.

CURING

Product cure time will vary from minutes to hours depending upon applied film thickness, temperature and relative humidity. Typical cure is 90 minutes for 16 mil WFT applied at 75°F (23.8°C) and 50% RH. Note: Cold and wet conditions will slow curing, while hot and dry conditions will accelerate curing. All supplemental coats and repairs should be performed after preceding coats are cured.

CLEANUP

Remove ALSAN Coating AC 401 overspray where required and clean tools and equipment before the material hardens using clean, warm, soapy water. ALSAN Coating AC 401 may be left in sealed airtight hose with airtight fittings overnight when required; ensure there is no air left in the hose line. However, if spray operations will be stopped or delayed for more than 24 hours, all hoses, lines and equipment should be cleaned and flushed free of all ALSAN Coating AC 401 using clean water. Flush hoses and lines with 10 to 15 gallons of water during the initial flush, followed by a second flush with 10 to 15 gallons of clean warm, soapy water until all ALSAN Coating AC 401 has been removed.

DISCLAIMER

The applicator is responsible for ensuring conditions are appropriate to proceed with proper application methods. Refer to SOPREMA product, specifications and guides for additional information. Materials and methods should be adjusted as necessary to accommodate varying project conditions. Materials should not be installed when conditions are unacceptable to achieve the specified results.