

APPLICATION GUIDELINES

COLPHENE FLAM 180 & COLPHENE FLAM 180 FR GR FOR PLAZA DECK WATERPROOFING

This waterproofing system uses COLPHENE FLAM 180, a heat welded, polyester reinforced, SBS modified base ply, and COLPHENE FLAM 180 FR GR, a heat welded, polyester reinforced, SBS modified top ply with a granulated top surface. This system is ideal for horizontal unexposed concrete waterproofing applications such as plaza decks.

HEALTH & SAFETY

The contractor shall ensure compliance with OSHA, EPA and other local governing and disposal authorities for project-related safety and environmental requirements. Prior to application, persons handling or applying the COLPHENE FLAM products should familiarize themselves with the applicable Product Data Sheets (PDS), Safety Data Sheets (SDS), specifications, and application instructions. The applicator is responsible for ensuring conditions are appropriate to proceed and proper application methods are followed.

When applying the COLPHENE FLAM products typical exposure levels will be below OSHA permissible limits for most outdoor 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

Store rolls on end and maintain in an upright position to prevent damage. Store rolls in a clean dry location and cover as necessary to protect from environmental damage such as extreme cold, heat, or moisture.

SUBSTRATE PREPARATION

All substrates must be clean, dry and free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, lacquers, or any other condition that would be detrimental to adhesion of resin materials to the substrate. Release agents and curing compounds must be removed prior to application of the COLPHENE FLAM 180.

Inspect all substrates, and correct defects before application of waterproofing materials. Concrete shall be fully cured and in place for a minimum of 28 days with a minimum of 2500 psi.

ENVIRONMENTAL CONDITIONS

Ensure environmental conditions are acceptable to proceed. Monitor precipitation, temperature, humidity, wind, cloud cover and sun that may have an effect on the materials and the application.

EQUIPMENT LIST

- Torch roll cane
- Gloves with ability to handle 350°F material
- Safety glasses
- Long sleeve cotton shirts for zero skin exposure
- Propane torch
- Blower and/or brooms

APPLICATION

Application should only occur when the moisture is at 5.0 % or less. Moisture can be measured with a non-destructive moisture meter. The surface of the concrete should match an ICRI Concrete Surface Profile of CSP 3 or CSP 4 .

All cracks, voids, pockmarks, and expansion joints in the concrete surface shall be treated according to the project specifications and all surfaces must be free of loose mortar and laitance. Any tie ends on vertical surfaces to receive waterproofing must be cut off flush with the wall surface.

Metalwork must be in place, securely attached and cleaned of all process oils with a solvent cleaner to be free of rust and other contaminants. Wire brush to a bright metal finish prior to priming.

COVERAGE RATES

ELASTOCOL 500 primer: 0.35 to 0.6 gallons per 100 square feet
COLPHENE FLAM 180 & 180 FR GR: 97.9 sq feet/roll.

PRIMER

ELASTOCOL™ 500 is a solvent-based primer used to improve the adhesion of COLPHENE FLAM 180 to concrete and metal and is applied using brush, roller, or sprayer at 0.35 to 0.6 gallons per 100 square feet. Lightly prime for a uniform coverage. Do not apply heavy or thick coats of primer.

Ensure primer is fully dry before installing the SBS membranes. Primer should not transfer to the finger tips when touched. Apply membrane within 24 hours of primer application, if primer becomes contaminated re-priming may be required.

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INSTALLATION

- 1. PRIMER:** Install ELASTOCOL 500 using a solvent resistant roller, bush, or airless spray. Allow ELASTOCOL 500 to dry before installing COLPHENE FLAM 180. For projects requiring lower VOC products, ELASTOCOL 350 may be used.
- 2. TRANSITIONS:** Use SOPRACANT® MB cant strips prior to waterproofing if waterproofing plies will be terminated up the wall, otherwise detail using ALSAN RS PMMA flashing after waterproofing is applied.
- 3. COLPHENE FLAM 180:**
 - a. Unroll COLPHENE FLAM 180 plies onto the deck and allow time to relax prior to heat welding.
 - b. Starting at the low point of the deck, lay out the membrane to ensure the plies are installed perpendicular to the slope and shingled to prevent back water laps.
 - c. Cut COLPHENE FLAM 180 to working lengths and widths and lay out to always work to a selvage edge.
 - d. Ensure specified side laps and end laps are maintained. End laps should be staggered 3' apart.
 - e. As the COLPHENE FLAM 180 is unrolled, apply heat to the underside of the ply until plastic burn-off film melts away sufficiently for full adhesion to the substrate.
 - f. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling.
 - g. While unrolling and heating the ply, ensure approximately ¼" to ½" of hot bitumen flows ahead of the roll, and there is 1/8" to ¼" in bleed out at side and end laps. Ensure all side-laps are fully adhered and sealed watertight.
 - h. At the 6" end laps ensure a fully adhered watertight seal. Melt the plastic burn off film from the already installed ply using the torch or hot-air welder.
 - i. At end-laps where T-Joints exist, cut a 45° dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat welded watertight at the T-joints.
 - j. Terminate COLPHENE FLAM 180 a minimum of 4" beyond the base of the wall.
 - k. Heat weld a flashing strip of COLPHENE FLAM 180 a minimum 8" up the vertical and 4" over the COLPHENE FLAM 180 base ply that was installed on the horizontal surface. Refer to SOPREMA drawing number US.WSBS.04.12.

4. COLPHENE FLAM 180 FR GR:

- a. Offset COLPHENE FLAM 180 FR GR side laps and end laps from the COLPHENE FLAM 180 laps by 12".
- b. Starting at the low point of the deck, lay out the membrane to ensure the plies are installed perpendicular to the slope and shingled to prevent back water laps.
- c. Cut COLPHENE FLAM 180 FR GR into working lengths and widths and lay out to always work to a selvage edge.
- d. Ensure specified side laps and end laps are maintained. End laps should be staggered 3' apart.
- e. As the COLPHENE FLAM 180 FR GR unrolled, apply heat to the underside of the ply until plastic burn-off film melts away sufficiently for full adhesion to the base ply.
- f. Continuously move the hand held propane torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling.
- g. While unrolling and heating the ply, ensure approximately ¼" to ½" of hot bitumen flows ahead of the roll, and there is ½" to ¾" in bleed out at side and end laps. Ensure all side-laps are fully adhered and sealed watertight.
- h. At the 6" end laps ensure a fully adhered watertight seal. Melt the plastic burn off film from the already installed ply using the torch or hot-air welder.
- i. At end-laps where T-Joints exist, cut a 45° dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat welded watertight at the T-joints.
- j. Terminate COLPHENE FLAM 180 FR GR a minimum of 4" beyond the base of the wall.
- k. Heat weld a flashing strip of COLPHENE FLAM 180 FR GR a minimum 8" up the vertical and 4" over the COLPHENE FLAM 180 FR GR top ply that was installed on the horizontal surface. Refer to SOPREMA drawing number US.WSBS.04.12.

DETAILING AFTER INSTALLATION OF COLPHENE FLAM 180 FR GR

Penetrations: All penetrations through the deck shall be rigidly fastened on both sides of the deck whenever possible. For a clean finish install masking tape to the penetration 8" above the surface prior to coating application and then remove immediately after coating is applied. Apply the ALSAN RS primer that is appropriate for the penetration type (e.g. metal or plastic) 8" onto the penetration and ALSAN RS 222 Primer a minimum of 6" onto the installed COLPHENE FLAM 180 FR GR top ply. Allow primers to cure a minimum of 30 minutes. Apply detail coat of ALSAN Trafik RS 730 FLASH at 60 mils 8" onto the penetration and 6" onto the COLPHENE FLAM 180 FR GR. Immediately embed the ALSAN RS FLEECE or ALSAN PRE-CUT FLEECE patterns from SOPREMA Drawing US.WSBS.02.11 followed immediately by another 30 mil detail coat of the ALSAN Trafik RS 730 FLASH a minimum of 1/8" beyond the fleece. Allow detail coat to cure for a minimum of 1.5 hours before covering with overburden.

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Drains: Shall be operational and recessed. The deck shall be sloped to drain. Block drain and turn the liquid applied flashing products into the drain by first applying ALSAN RS Metal primer a minimum of 3" into the drain and ALSAN RS 276 primer 6" out onto the COLPHENE FLAM 180 FR GR. Allow primers to cure a minimum of 30 minutes. Apply detail coat of ALSAN RS 730 FLASH at 60 mils into the drain and onto the COLPHENE FLAM 180 FR GR. Prepare the ALSAN RS FLEECE or ALSAN PRE-CUT FLEECE patterns shown in SOPREMA Drawing RS-FC06 and embed them into the wet coating being sure to saturate both the finger pattern and the target patch. Immediately apply another 30 mil detail coat of the ALSAN Trafik RS 730 FLASH a minimum of 1/8" beyond the fleece on the horizontal.

Allow detail coat to cure for a minimum of 1.5 hours before covering with overburden.

Membrane Testing: Leak detection can be performed using electronic field vector mapping following the ASTM Standard D7877 or flood testing can be performed using ASTM D5957.

SOPRADRAIN™ Drainage Mat: Install SOPRADRAIN Drainage Mat loose laid or refer to the project specification for assistance in selecting the proper product.

SOPRA-XPS Insulation: Refer to specification for the required compressive strength and R-Value.

SOPRANATURE® overburden assemblies: Refer to the project specification or contact your local SOPREMA sales representative for proper selection of specified overburden assemblies.

CLEANUP

Dispose of unused products in accordance with local rules and regulations. Consult local, provincial, territory or state authorities to know disposal methods.

Wet ELASTOCOL 500 primer can be cleaned using hydrocarbon solvents such as xylene or mineral spirits. Dry and cured material should be mechanically and carefully removed.

