

WALL AIR BARRIERS TECHNICAL MANUAL



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INTRODUCTION

<u>SOPREMA®</u> offers a broad range of wall air barrier/vapor retarder solutions to protect the building interior against air and water intrusion. <u>SOPREMA®</u> wall products may be integrated with <u>SOPREMA®</u> roofing and waterproofing systems to complete single-source building envelope solutions. The <u>SOPREMA®</u> SOPRASEAL® family of wall products are produced using proven technologies with successful history backed by <u>SOPREMA®</u> warranties.

<u>SOPREMA®</u> offers both vapor permeable and non-permeable products. Application methods include liquidapplied, self-adhesive sheets and factory-laminated exterior gypsum wall boards.

<u>SOPREMA®</u> products are tested and evaluated by accredited third-party laboratories and agencies. Results are available for review and acceptance by the design professional as required for specific use. Refer to published Product Data Sheets (PDS), evaluation reports and listings.

- <u>SOPREMA®</u> wall products and assemblies are tested and evaluated in accordance with *the Air Barrier* Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as listed on-line by ABAA.
- <u>SOPREMA®</u> wall products and assemblies are tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- The <u>SOPREMA®</u> wall products and assemblies are tested and evaluated for use as *water-resistive barriers* (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services* Acceptance Criteria 38 (ICC-ES AC38): Acceptance Criteria for Water-Resistive Barriers, and the ICC-ES AC212: Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing. Refer to each wall air barrier product data sheet (PDS) or contact <u>SOPREMA®</u> for specific material and system properties.
- <u>SOPREMA®</u> wall products and assemblies are included in third-party engineering evaluation reports to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. Contact <u>SOPREMA®</u> to obtain copies of NFPA 285 Engineering Evaluation Reports.

The <u>SOPREMA®</u> "WALL AIR BARRIERS TECHNICAL MANUAL" is intended to offer guidance to applicators and design professionals. The manual provides general application instructions and details for <u>SOPREMA®</u> wall air barrier products and accessories. Refer to applicable building codes, standards and industry publications for additional requirements and best-practice guidelines. Refer to current <u>SOPREMA®</u> product data sheets and safety data sheets for specific product data and product-related requirements. For additional information refer to <u>www.soprema.us</u> or contact <u>SOPREMA®</u> at 800.356.3521.

SOPREMA® Wall Air Barrier Systems						
Application	Vapor Permeance	Air Barrier	Air Barrier Primer	Flashing	Flashing Primer	Flashing Accessories
	Vapor	SOPRASEAL® LM 204 VP	None	SOPRASEAL [®] LIQUID FLASHING	None	SOPRASEAL® SEALANT
Liquid-Applied	Section 2.1	SOPRASEAL® LM 202 VP	None	SOPRASEAL [®] LIQUID FLASHING	None	SOPRASEAL® SEALANT
	Non- Permeable <u>Section 2.2</u>	SOPRASEAL® LM 203	None	SOPRASEAL [®] LIQUID FLASHING	None	SOPRASEAL® SEALANT
	Vapor	<u>SOPRASEAL®</u>	None	SOPRASEAL [®] LIQUID FLASHING	None	SOPRASEAL®
	Section 3.1	<u>STICK VP</u>	None	SOPRASEAL® STICK FLASHPRO	None	SEALANT
	Non-		SOPRASEAL® STICK	ELASTOCOL™ STICK,		
Self Adhesive- Applied		E SOPRASEAL® STICK 1100T E	ELASTOCOL [™] STICK, ELASTOCOL [™] STICK ZERO, ELASTOCOL [™] STICK H20	1100T	ELASTOCOL™ STICK ZERO	
	Permeable Section 3.2			SOPRASEAL [®] STICK FLASHPRO	None	SOPRASEAL® SEALANT
				SOPRASOLIN HD	ELASTOCOL™ STICK,	
					ELASTOCOL™ STICK ZERO	
				SOPRASEAL® STICK	ELASTOCOL™ STICK,	
Laminated Gypsum Board				1100T	ELASTOCOL™ STICK ZERO	
	Non- Permeable Section 4.1	SOPRASEAL® XPRESS G	AL® SOPRA G FL/	SOPRASEAL® STICK FLASHPRO	None	SOPRASEAL® SEALANT
					ELASTOCOL™ STICK,	
				SOPRASOLIN HD	ELASTOCOL™ STICK ZERO	

DISCLAIMER

This manual is intended for use by applicators and design professionals in order to provide instructions and details for the application of <u>SOPREMA®</u> wall products when a <u>SOPREMA®</u> warranty is requested. The contents of this manual are consistent with best industry practices, but are not specific to any particular project's needs and are not a substitute for professional design services. <u>SOPREMA®</u> bears no liability nor responsibility for the evaluation or design of any particular project.

The applicator is responsible for ensuring compliance with contract documents, project specifications, industry standards and jurisdictional codes necessary to meet the requirements for specific project applications.

1 GENERAL

1.1 SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION

General:

- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.
- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.
- Substrate Evaluation, Cleaning, Repair and Preparation:
 - Examine all substrates before applying primer, air barrier products and accessories. Ensure substrates are satisfactory before proceeding with work.
 - Do not apply air barrier materials to wet surfaces, dew, frost or ice. Surfaces should be dry to the touch with no visible signs of moisture. Refer to contract documents and substrate manufacturer's requirements related to substrate moisture content, substrate exposure limits and other conditions, limitations and related requirements.
 - After precipitation, examine conditions and allow sufficient time for substrate surfaces to dry before applying air barrier materials.
 - Refer to contract documents and substrate product requirements related to material evaluation, cleaning, repair and preparation.
- Concrete substrates:
 - Refer to design documents, published instructions, and/or applicable concrete industry standards for guidance related to substrate securement, exposure limits and other conditions related to acceptance of concrete before proceeding with air barrier product installation.
 - Ensure concrete is cured as specified for the project and as required for the <u>SOPREMA®</u> air barrier products. Refer to Product Data Sheets (PDS) for specific material requirements.
 - Ensure substrates are clean, dry and free of efflorescence, laitance, dust, dirt and other materials that may prevent adhesion of the air barrier products. When concrete condition is suspect, conduct *adhesion tests* as indicated below.
 - Examine concrete for irregularities such as voids, gaps, spalling, fins and other planar irregularities.
 - Ensure planar irregularities are addressed and repair concrete as necessary to provide a uniform surface with no planar irregularities greater than ¼ in in 10 ft (6.4mm in 3 m).
 - Concrete substrates should provide a uniform, satisfactory surface to achieve the desired adhesion of air barrier products.
 - Notify the design professional, general contractor and/or other responsible party when substrate conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying SOPRASEAL[®] materials.
- Masonry substrates and concrete masonry units (CMU):

- Refer to design documents, published instructions, and/or applicable masonry industry standards for guidance related to substrate securement, exposure limits and other conditions related to acceptance of masonry before proceeding with product installation.
- Ensure masonry substrates are clean, dry and free of efflorescence, dust, dirt and other materials that interrupt the air barrier application or prevents adhesion. When conditions are suspect, conduct *adhesion tests* as indicated below.
- Ensure masonry joints are struck flush and filled with mortar.
- Remove mortar debris from masonry unit surfaces, at masonry ties, around shelf angles and as required to produce a uniform surface free of debris that may interrupt air barrier application.
- Notify the design professional, general contractor and/or other responsible party when substrate conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying SOPRASEAL[®] air barrier materials.
- Wall board sheathing substrates:
 - Refer to design documents, wall sheathing manufacturer's published instructions, and/or applicable wall board sheathing industry standards for guidance related to substrate securement, exposure limits and other conditions related to acceptance of materials before proceeding with air barrier product installation.
 - Ensure fasteners are driven flush with the board surface. Replace all mis-driven and over-driven fasteners and repair damages as necessary.
 - Ensure boards are secure and the substate is uniform at board joints, wall penetrations, transitions and terminations.
 - Ensure substrates are cleaned to remove dust, debris and foreign materials that may prevent adhesion of the air barrier products.
 - Ensure substrates are dry and free of frost and ice.
 - Ensure the wall board substrates are in good condition. Boards should not be damaged, delaminated, cracked, checked, split or otherwise inadequate to proceed with the air barrier material application.
 - Substrate wall board sheathing should meet the following minimum standards and product specifications:
 - Gypsum board: ASTM C1396: Standard Specification for Gypsum Board and/or ASTM C1177: Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing exterior wall sheathing, meeting requirements for exterior-grade, water-resistant core, minimum ½ in (12.7 mm) gypsum sheathing.
 - Cement board: ASTM C1325: Standard Specification for Fiber-Mat Reinforced Cementitious Backer Unit requirements of Type A Exterior Sheathing.
 - Exterior Plywood: National Institute of Standards and Technology (NIST), US Department of Commerce, Voluntary Product Standard PS 1, *Structural Plywood*. Exposure 1 plywood, Grade C-D or Better.
 - Exterior OSB: National Institute of Standards and Technology (NIST), US Department of Commerce, Voluntary Product Standard PS 2, *Performance Standard for Wood-Based Structural-Use Panels*. Minimum 7/16 in (11.1 mm) thickness.
 - When wall board substrate conditions are suspect, conduct *adhesion tests* as indicated below.
 - Notify the design professional, general contractor and/or other responsible party when substrate conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying SOPRASEAL[®] air barrier materials.
- Laps, joints and tie-ins:
 - Ensure overlapping surfaces and joints for the SOPRASEAL[®] products are clean, dry and free of dust, debris, residues and other contaminates that prevent adhesion.
 - Remove dust, dirt and loose debris using a clean dry cloth or broom.
 - To clean SOPREASEAL[®] surfaces, refer to the cleaning requirements for specific materials indicated herein. Do not use detergents or cleaning solutions that leave a soapy or oily residue.

- SOPRASEAL® STICK 1100T, SOPRASEAL® XPRESS G and SOPRASOLIN HD: For SBS self-adhesive materials, primer is recommended as project conditions require to ensure satisfactory adhesion at laps, joints and tie-ins. Prime the film or foil surface using ELASTOCOL™ STICK or ELASTOCOL™ STICK ZERO primer. ELASTOCOL™ STICK H20 water-based primer is not recommended for film or foil surfaces at laps, joints and tie-ins.
- Examine adhesion where overlapping materials have been damaged or otherwise compromised.
- <u>SOPRASEAL® STICK 1100T, SOPRASEAL® XPRESS G</u> and <u>SOPRASOLIN HD</u> consist of self-adhesive SBS modified bitumen. The SBS self-adhesive modified bitumen products should not overlap onto SOPREMA® SENTINEL® PVC and KEE roofing and flashing materials. When self-adhesive SBS modified bitumen is adhered directly to SENTINEL® roofing and flashing materials, the SBS selfadhesive backing will become soft and may liquify.
- Adhesion Tests:
 - Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where substrates are not consistent (such as masonry and concrete), where conditions vary due to extreme exposure and/or where the quality of adhesion is suspect.
 - Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.
- Contact <u>SOPREMA®</u> for additional guidance related to SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.

1.2 PRIMERS FOR SBS MODIFIED BITUMEN SELF ADHESIVE-APPLIED AIR BARRIERS

General:

surfaces.

- <u>ELASTOCOL[™] STICK</u> is a fast-drying, solvent-based primer containing 500 g/L VOC's. The primer is used to ensure adhesion to wall substrates when using self-adhesive SBS modified bitumen products. The primer may also be applied to film facers and foil surfaces.
- ELASTOCOL[™] STICK ZERO is a fast-drying, solvent-based primer containing 0 g/L VOC's based on EPA regulations and 240 g/L VOC's based on SCAQMD regulations. The primer is used to ensure adhesion to wall substrates when using self-adhesive SBS modified bitumen products. The primer may also be applied to film facers and foil
- ELASTOCOL[™] STICK H2O is a 0 g/L VOC, waterbased emulsion primer used to ensure adhesion to wall substrates when using self-adhesive SBS modified bitumen products. Not recommended for use on film surfaces or foil facers.
- Primer is *required* for all wall substrates before applying <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u> SBS modified bitumen selfadhesive products.
 - Primer is recommended for film and foil laps, joints and tie-ins to ensure optimum adhesion. Prime film and foil surfaces using <u>ELASTOCOL™ STICK</u> or <u>ELASTOCOL™ STICK</u>



ZERO primer. ELASTOCOL[™] STICK H20 water-based primer is not recommended for film or foil surfaces.

- Refer to air barrier Product Data Sheets (PDS) and additional guidance indicated herein for acceptable wall substrates.
- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.
- Refer to product Safety Data Sheets (SDS) for health, safety, fire and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Preparation:

• Prepare substrates as required to install primer. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.

- Ambient conditions should be dry and well above the dew point temperature. During humid weather, and during periods when the substrate temperature is near the dew point temperature, examine substrates closely for condensation. Do not install primer if condensation forms on substrates or if condensation forms on the primer during application.
- During humid conditions, and when the temperature is near the dew point, condensation may form on the primer surface due to evaporative cooling as solvents evaporate. Do not proceed if condensation forms on primed surfaces.
- Stir/mix primers while in their original pail until the primer is thoroughly blended.

Application:

- Weather Conditions:
 - Monitor weather conditions, as well as substrate and material temperatures to ensure conditions remain satisfactory. Protect materials from weather-related damages.
 - Surfaces should be dry to the touch with no visible signs of moisture.
 - Ensure weather conditions are dry during application.
 - The ambient temperature should be well above the dew point temperature, with no dew, fog or condensation present.
 - During cold weather, primer materials should be stored in a heated area and maintained at or above 70°F (21°C).
 - <u>ELASTOCOL™ STICK</u> or <u>ELASTOCOL™ STICK ZERO</u> solvent-based primers are recommended during cold weather applications.
 - <u>ELASTOCOL™ STICK H20</u> water-based primer is recommended for warm weather conditions and should not be used when freezing temperatures are anticipated.
 - During hot, sunny weather, solvent-based primers dry quickly. During hot, sunny conditions store all primers in a cool or shaded area away from direct sunlight.
 - Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application and tack time. Monitor the application and adjust application methods as necessary to accommodate changing weather conditions.
- Use a nap roller or brush to apply a uniform thin application of <u>ELASTOCOL™ STICK</u> and <u>ELASTOCOL™</u> <u>STICK ZERO</u> at a rate of 0.7 to 1.0 gallons per 100 square feet. Application rates vary based on substrate porosity and project conditions. Prevent thick applications, pooling and clumping of primer.
- Use a nap roller or brush to apply a uniform thin application of <u>ELASTOCOL[™] STICK H2O</u> at a rate of 0.3 to 0.7 gallons per 100 square feet. Application rates vary based on substrate porosity and project conditions. Prevent thick applications, pooling and clumping of primer.
- <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u> sheets should be installed soon after primer application. Primer should not be left exposed for extended periods or overnight to prevent contamination.

Inspection:

- Examine the primed substrates before installing <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u>.
- Ensure primer is tacky to-the-touch, but not wet. Primer should not transfer to the fingertips when touched. Thick pools or clumps of wet primer should be removed.
- If primer dries, becomes dusty and loses all tack, re-prime as necessary to achieve the desired membrane adhesion.
- Tack-time varies for each primer based on conditions. Refer to the primer Product Data Sheet for additional guidance.
- Examine the quality of adhesion of the self-adhesive plies during installation. Adjust primer and sheet application methods as necessary to achieve the desired result.

2 LIQUID-APPLIED WALL AIR BARRIERS

2.1 VAPOR PERMEABLE LIQUID-APPLIED WALL AIR BARRIERS

SOPRASEAL® LM 204 VP

General:

- <u>SOPRASEAL® LM 204 VP</u> is a vapor permeable, low-odor liquid applied air barrier. The polyether chemistry is suitable for a wide range of weather conditions. <u>SOPRASEAL® LM 204 VP</u> is ultra-low VOC and ultra-high solids, yielding virtually no dry-down shrinkage resulting in fast, single-pass applications to achieve to the desired dry film thickness (DFT).
- Refer to the <u>SOPRASEAL® LM 204 VP</u> Product Data Sheet (PDS) for material properties.
- Accessory Products:
 - SOPRASEAL[®] LIQUID FLASHING: Gun-grade, low-VOC, STPE/polyether chemistry liquid flashing packaged in 20 oz sausage packs.
 SOPRASEAL[®] LIQUID FLASHING is applied to rough openings, joints, transitions, terminations and penetrations to create non-permeable seamless transitions. It is used to flash and seal the air barrier to steel, aluminum, brick, concrete, wood, masonry, vinyl, PVC, brick ties and fasteners.
 - Refer to the <u>SOPRASEAL® LIQUID FLASHING</u> Product Data Sheet (PDS) for material properties.
- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective



equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.

- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL® LM 204 VP</u> Product Data Sheet (PDS) for material properties.
- Air barrier performance:

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- <u>SOPRASEAL® LM 204 VP</u> is tested and evaluated in accordance with the Air Barrier Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as listed on-line by ABAA. Refer to <u>www.airbarrier.org</u>.
- <u>SOPRASEAL® LM 204 VP</u> is tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- Water resistive barrier (WRB) performance:
 - SOPRASEAL[®] LM 204 VP is tested and evaluated for use as water resistive barriers (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services* Acceptance Criteria ICC-ES AC212: Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing.
- Fire performance:
 - <u>SOPRASEAL® LM 204 VP</u> is evaluated by third-party engineering to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. Contact SOPREMA® to obtain copies of NFPA 285 Evaluation Reports.
 - <u>SOPRASEAL® LM 204 VP</u> meets Class A per ASTM E 84 *Standard Test Method for Surface Burning Characteristics of Building Materials.* Contact

Preparation:

- Prepare substrates as required to install <u>SOPRASEAL® LM 204 VP</u>. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.
- Ensure penetrations and transitions are clean, prepared and secured to prevent movement.
- Prepare all gaps and breaks between substrates and ensure they are prepared before applying <u>SOPRASEAL® LM 204 VP</u> and related materials.
- For optimum performance, pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to flash fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 204 VP</u>. Refer to detail drawings. X may also be applied over Y where job conditions require.
- Where materials overlap, install <u>SOPRASEAL® LIQUID FLASHING</u> and <u>SOPRASEAL® LM 204 VP</u> on the same day to minimize jobsite exposures.
- Wipe surfaces clean using isopropyl alcohol or acetone and a clean cloth to improve adhesion at overlaps where air barrier materials have been left exposed to dust, dirt, weather, UV and other adverse jobsite conditions.
- Adhesion tests:
 - Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where non-factory substrates are used and where substrate conditions vary.
 - Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.

Application:

- Refer to <u>SOPRASEAL® LM 204 VP</u> Product Data Sheet (PDS) for application rate and mil thickness required for vapor permeance performance. Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> and <u>SOPRASEAL® SEALANT</u> to flash and seal substrates before installing <u>SOPRASEAL® LM 204 VP</u>.
- Weather conditions:
 - Surfaces should be dry to the touch with no visible signs of moisture. Do not apply materials to wet surfaces, dew, frost or ice.

- Ice and frost will prevent adhesion of <u>SOPRASEAL® LM 204 VP</u>. During extended periods of cold weather examine substrates carefully to ensure there is not frost nor ice present.
- Monitor substrate and material temperatures to ensure conditions remain satisfactory while applying <u>SOPRASEAL® LM 204 VP</u>. Protect materials from weather-related damages.
- <u>SOPRASEAL® LM 204 VP</u> can be applied down to 25°F (-4°C). <u>SOPRASEAL® LM 204 VP</u> is not subject to freezing; however, materials become viscous and increasingly difficult to apply when the material becomes cold. Maintain materials at or above 70°F (21°C) during cold weather for optimum application.
- During extended periods of cold weather, materials should be stored in a heated area and maintained at or above 70°F (21°C). Provide band-type drum and pail heaters designed to heat containers during cold weather.
- <u>SOPRASEAL® LM 204 VP</u> cures faster and skins over quickly when materials and substrates are exposed to high temperatures and high humidity.
- During hot, sunny conditions store materials in cool or shaded areas away from direct sunlight.
- Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application and cure time. Monitor project conditions and adjust application methods as necessary to accommodate changing weather conditions.
- Flashings & Sealants:
 - For optimum performance, pre-apply flashings and sealants to wall substrates, fenestrations, penetrations and transitions before applying the <u>SOPRASEAL® LM 204 VP</u> to the wall substrates. Refer to detail drawings. <u>SOPRASEAL® LIQUID FLASHING</u> may also be applied over <u>SOPRASEAL® LM 204 VP</u> where job conditions require.
 - For flashings, apply <u>SOPRASEAL® LIQUID FLASHING</u> using a sausage-pack sealant gun. Use a flat blade putty knife/scraper to spread a uniform application to seal joints, fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 204 VP</u>.
 - Apply <u>SOPRASEAL® LIQUID FLASHING</u> at the thickness required for each detail as indicated herein. The minimum application thickness of <u>SOPRASEAL® LM 204 VP</u> is 20 wet mils.
 - Apply <u>SOPRASEAL® SEALANT</u> using a 10 oz sealant gun to seal joints, edges and details as indicated and detailed herein.
 - Allow approximately 30 minutes or more for <u>SOPRASEAL® LIQUID FLASHING</u> to fully skin-over before applying <u>SOPRASEAL® LM 204 VP</u>.
 - Where materials overlap, install <u>SOPRASEAL® LIQUID FLASHING</u> and <u>SOPRASEAL® LM 204 VP</u> on the same day to minimize jobsite exposures.
 - Wipe surfaces clean using isopropyl alcohol or acetone and a clean cloth to improve adhesion at overlaps where air barrier materials have been left exposed to dust, dirt, weather, UV and other adverse jobsite conditions.
 - Wall substrate pre-treatment:
 - Fastener heads and other small voids: Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to exposed fastener heads and small 1/8 in voids. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate.
 - Wall board joints, edges and corners: Apply <u>SOPRASEAL® LIQUID FLASHING</u> in a zigzag pattern extending 1 to 2 in beyond both sides of joints and edges. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate to form a weather-tight seal.
 - Control joints and gaps: For joints and gaps ¼ in wide and up to ½ in wide, install non-gassing polyethylene foam backer rod with a diameter 25 percent greater than the joint/gap width.
 Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> to ensure a 2:1 joint width-to-sealant depth/thickness ratio. Tool the <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> as indicated in detail drawings.
 - Expansion joints and drift joints: Building expansion joints and drift joints are designed and installed as specified for each project. Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL®</u>

<u>SEALANT</u> to tie-in and seal to compatible expansion joint /drift joint materials. Contact SOPREMA for additional information.

- Flashings: Fenestrations, penetrations and transition flashings: Refer to <u>Table 2.1c</u> and <u>Figures</u> <u>2.1a through 2.1m</u> for <u>SOPRASEAL® LM 204 VP</u> details.
- Wall substrate application:
 - Overlaps and tie-ins:
 - Ensure overlapping surfaces and joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust and debris using a clean dry cloth.
 - To clean surfaces at tie-ins, use isopropyl alcohol or acetone and a clean cloth. Do not
 use detergents or cleaning materials that leave a soapy or oily residue.
 - Use a ½ nap roller, paint brush, or spray equipment to apply <u>SOPRASEAL® LM 204 VP</u> to wall substrates.
 - Spray equipment:

- Pump Model:
 - Graco GH933
 - Graco 675DI
- Gun: XTR7
- Pump Pressure: 6,750psi 7,250psi
- Pump Volume: 1.5gpm 2.5gpm
- Tip: XHD
- Tip Orifice: 0.031in 0.041in
 - Tip Flow Rate:
 - Graco GH933: 1.03gpm 1.98gpm
 - Graco 675DI: 1.3gpm
- Tip Guard: XHD RAC Guard
- Fan Width (12in from surface): 10in 24in
- Hose Length: 50ft
- Hose Pressure Rating: 7,250psi
- Hose ID: 3/8in max
- Whip Hose Length: 15ft
- Whip ID: 3/8in
- Whip Pressure Rating: 7,250psi
- <u>SOPRASEAL® LM 204 VP</u> can be applied in one lift when up to 40 mils thick. Apply in two equal lifts when the desired thickness is over 40 mils.
- As <u>SOPRASEAL[®] LM 204 VP</u> is applied, measure the wet mil thickness using a wet mil thickness gage during application to ensure the minimum thickness is maintained throughout the project.
- Coverage rates: Refer to <u>Table 2.1a</u> for <u>SOPRASEAL® LM 204 VP</u> coverage rates.
- <u>SOPRASEAL® LM 204 VP</u> cures in 2 hours when applied at 20 mils at 70°F (21°C) and 50% relative humidity. Cure time varies based on weather and other project conditions.
- Additional <u>SOPRASEAL® LM 204 VP</u> lifts and tie-ins should be applied within 72 hours. Examine surfaces at tie-ins and between lifts to ensure conditions are satisfactory.
- Refer to <u>Table 2.1d</u> for vertical tie-ins between roofing, wall air barrier and foundation waterproofing materials.

Inspection:

• As materials are applied, inspect the application to ensure the applied materials are free of voids, pin holes, blisters or other deficiencies. Stop application if these deficiencies appear. Determine the cause of deficiencies before resuming application.

- Once dried, remove all delaminated, unadhered and blistered material. Apply additional <u>SOPRASEAL® LM 204 VP</u> as necessary to make repairs and correct all deficiencies.
- Inspect tie-ins to <u>SOPRASEAL® LM 204 VP</u> and tie-ins to other materials to ensure substrate conditions are clean and acceptable to proceed with work.
- Exposure: Once installed, <u>SOPRASEAL® LM 204 VP</u> may exposed for up to 180 days. Due to the wide range of weather-related exposures and building conditions, the effects on <u>SOPRASEAL® LM 204 VP</u> vary from project to project.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the materials with subsequent building systems.

Table 2.1a <u>SOPRASEAL[®] LM 204 VP</u> Coverage Rates					
Air Barrier	Substrate	Thickness (wet)	Thickness (dry)	Coverage Rate	
SOPRASEAL [®] LM 204 VP	Smooth and relatively non-porous surfaces	20 mils	20 mils	78-80 ft ² /gallon	

Table 2.1b <u>SOPRASEAL® LM 204 VP</u> Warranty Terms				
Form	Warranty Term	Air Barrier	Flashing	
Limited Warranty For Wall Products, Form W115	5 years	SOPRASEAL [®] LM 204 VP	SOPRASEAL [®] LIQUID FLASHING	

Contact SOPREMA for additional information.

Table 2.1c <u>SOPRASEAL® LM 204 VP</u> Details					
Air Barrier	Detail Name	Figure			
	Sheathing Joint Treatment	Sheathing	<u>2.1a</u>		
	Corpore	Sheathing	<u>2.1b</u>		
	corners	Masonry	<u>2.1h</u>		
	Control Joint	Sheathing	<u>2.1c</u>		
	Control Joint	Masonry	<u>2.1i</u>		
	Econoctration	Sheathing	<u>2.1d</u>		
SOPRASEAL® LM 204 VP	Fenestration	Masonry	<u>2.1j</u>		
	Departmention	Sheathing	<u>2.1e</u>		
	Penetration	Masonry	<u>2.1k</u>		
	Wall and Doof Junction	Sheathing	<u>2.1f</u>		
		Masonry	<u>2.1l</u>		
	Wall and Foundation Junction	Sheathing	<u>2.1g</u>		
		Masonry	<u>2.1m</u>		

Table 2.1d <u>SOPRASEAL® LM 204 VP</u> Vertical Tie-In			
Adjacent Membrane	Tie-In	Notes	
SENTINEL PVC roofing (bareback)	A	Seal PVC roofing membrane to cured <u>SOPRASEAL® LM 204 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (burn-off film underside)	A	Remove burn-off film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 204 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen (self-adhered underside)	A	Remove release film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 204 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (sanded underside)	А	Seal modified bitumen roofing membrane to cured <u>SOPRASEAL® LM 204</u> <u>VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen flashings	В	Install termination bar at leading edge of SBS modified bitumen flashings. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 204 VP</u> to termination bar.	
ALSAN [®] RS 230 FLASH or ALSAN [®] RS 260 LO FLASH	С	Extend <u>SOPRASEAL® LM 204 VP</u> onto <u>ALSAN® RS 230 FLASH</u> or <u>ALSAN® RS</u> <u>260 LO FLASH</u> .	
<u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> foundation blindside waterproofing	В	Adhere <u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> to wall with <u>COLPHENE®</u> <u>BARR FLASHING</u> and install termination bar at leading edge. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fastener heads. Extend <u>SOPRASEAL® LM 204 VP</u> to termination bar.	
COLPHENE® 3000 or COLPHENE® ICF foundation waterproofing	В	Install termination bar at leading edge of <u>COLPHENE® 3000</u> or <u>COLPHENE®</u> <u>ICF</u> . Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 204 VP</u> to termination bar.	
COLPHENE® LM BARR or COLPHENE® LM BARR SPRAY foundation waterproofing	С	Extend <u>SOPRASEAL® LM 204 VP</u> onto <u>COLPHENE® LM BARR</u> or <u>COLPHENE®</u> <u>LM BARR SPRAY</u> .	
ALSAN® TRAFIK RS 730 FIELD or ALSAN® TRAFIK RS 730 FLASH	С	Extend <u>SOPRASEAL® LM 204 VP</u> onto <u>ALSAN® TRAFIK RS 730 FIELD</u> or <u>ALSAN® TRAFIK RS 730 FLASH</u> .	



Apply <u>SOPRASEAL® SEALANT</u> to seal all roof-to-wall and wall-to-foundation waterproofing transitions, terminations, and penetrations and as shown.



Figure 2.1a SOPRASEAL[®] LM 204 VP, Sheathing Joint Treatment



Figure 2.1b SOPRASEAL[®] LM 204 VP, Inside/Outside Corners On Sheathing



Figure 2.1c SOPRASEAL® LM 204 VP, Control Joint On Sheathing



Figure 2.1d SOPRASEAL[®] LM 204 VP, Fenestration On Sheathing



Figure 2.1e SOPRASEAL[®] LM 204 VP, Penetration On Sheathing



Figure 2.1f SOPRASEAL[®] LM 204 VP, Wall And Roof Junction On Sheathing



Figure 2.1g SOPRASEAL[®] LM 204 VP, Wall And Foundation Junction On Sheathing



Figure 2.1h SOPRASEAL® LM 204 VP, Inside/Outside Corners On Masonry



Figure 2.1i SOPRASEAL[®] LM 204 VP, Control Joint On Masonry



Figure 2.1j SOPRASEAL[®] LM 204 VP, Fenestration On Masonry



Figure 2.1k SOPRASEAL[®] LM 204 VP, Penetration On Masonry





SOPRASEAL® LM 202 VP

General:

- <u>SOPRASEAL® LM 202 VP</u> is a vapor permeable, one-component, water-based, non-flammable modified rubber chemistry, liquid-applied air barrier.
- Refer to the SOPRASEAL[®] LM 202 VP Product Data Sheet (PDS) for material properties.
- Accessory Products:
 - SOPRASEAL[®] LIQUID FLASHING: Gun-grade, low-VOC, STPE/polyether-chemistry liquid flashing packaged in 20 oz sausage packs.
 SOPRASEAL[®] LIQUID FLASHING is applied to rough openings, joints, transitions, terminations and penetrations to create non-permeable seamless transitions. Used to flash and seal the air barrier to steel, aluminum, brick, concrete, wood, masonry, vinyl, brick ties and fasteners. Refer to the SOPRASEAL[®] LIQUID FLASHING Product Data Sheet (PDS) for material properties.
 - SOPRASEAL[®] MESH is a non-woven polyester fabric used to reinforce <u>SOPRASEAL[®] LM 202 VP</u> where applied at joints, corners, transitions and terminations. Rolls of mesh measure 4, 6 and 9 in wide x 180 ft. long.



• The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances

and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.

- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL[®] LM 202 VP</u> Product Data Sheet (PDS) for material properties.
- Air barrier performance:
 - <u>SOPRASEAL® LM 202 VP</u> is tested and evaluated in accordance with the Air Barrier Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as listed on-line by ABAA. Refer to <u>www.airbarrier.org</u>.

- <u>SOPRASEAL® LM 202 VP</u> is tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- Water resistive barrier (WRB) performance:
 - <u>SOPRASEAL® LM 202 VP</u> is tested and evaluated for use as water resistive barriers (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services* Acceptance Criteria ICC-ES AC212: Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing.
- Fire performance:
 - <u>SOPRASEAL® LM 202 VP</u> is evaluated by third-party engineering to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible. Contact Components. Contact <u>SOPREMA®</u> to obtain copies of NFPA 285 Evaluation Reports.
 - <u>SOPRASEAL® LM 202 VP</u> meets Class A per ASTM E 84 *Standard Test Method for Surface Burning Characteristics of Building Materials.* Contact

Preparation:

- Prepare substrates as required to install <u>SOPRASEAL® LM 202 VP</u>. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.
- Ensure penetrations and transitions are clean, prepared and secured to prevent movement.
- Prepare all gaps and breaks between substrates and ensure they are prepared before applying <u>SOPRASEAL® LM 202 VP</u> and related materials.
- Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to flash fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 202 VP</u>. Refer to detail drawings.
- Adhesion tests:
 - Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where non-factory substrates are used and where substrate conditions vary.
 - Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.

Application:

- Refer to <u>SOPRASEAL® LM 202 VP</u> Product Data Sheet (PDS) for application rate and mil thickness required for vapor permeance performance. Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> and <u>SOPRASEAL® SEALANT</u> to flash and seal substrates before installing <u>SOPRASEAL® LM 202 VP</u>.
- Weather conditions:
 - Surfaces should be dry to the touch with no visible signs of moisture. Do not apply materials to wet surfaces, dew, frost or ice.
 - Ice and frost will prevent adhesion of <u>SOPRASEAL® LM 202 VP</u>. During extended periods of cold weather examine substrates carefully to ensure there is not frost nor ice present.
 - Monitor substrate and material temperatures to ensure conditions remain satisfactory while applying <u>SOPRASEAL® LM 202 VP</u>. Protect materials from weather-related damages.
 - During extended periods of cold weather, materials should be stored in a heated area and maintained at or above 70°F (21°C). Provide band-type drum and pail heaters designed to heat containers as necessary during cold weather.
 - Ensure the ambient temperature during application is 40°F (4°C) and rising.
 - During hot, sunny weather, <u>SOPRASEAL® LM 202 VP</u> may dry quickly. During hot, sunny conditions store materials in cool or shaded areas away from direct sunlight.

- Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application and cure time. Monitor project conditions and adjust application methods as necessary to accommodate changing weather conditions.
- Flashings & Sealants:
 - Pre-apply flashings and sealants to wall substrates, fenestrations, penetrations and transitions before applying the <u>SOPRASEAL® LM 202 VP</u> to the wall substrates.
 - For flashings, apply <u>SOPRASEAL® LIQUID FLASHING</u> using a sausage-pack sealant gun. Use a flat blade putty knife/scraper to spread a uniform application to seal joints, fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 202 VP</u>.
 - Apply <u>SOPRASEAL® LIQUID FLASHING</u> at the thickness required for each detail as indicated herein. The minimum application thickness of <u>SOPRASEAL® LM 202 VP</u> is 20 wet mils.
 - Apply <u>SOPRASEAL® SEALANT</u> using a 10 oz sealant gun to seal joints, edges and details as indicated and detailed herein.
 - Allow approximately 30 minutes or more for <u>SOPRASEAL® LIQUID FLASHING</u> to fully skin-over before applying <u>SOPRASEAL® LM 202 VP</u>.
 - Wall substrate pre-treatment:
 - Fastener heads and other small voids: Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to exposed fastener heads and small 1/8 in voids. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate.
 - Treat board joints, edges and corners by one of the following methods:
 - Apply <u>SOPRASEAL® LIQUID FLASHING</u> in a zigzag pattern extending a 1 to 2 in beyond both sides of joints and edges. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate to form a weather-tight seal.
 - Board joints, edges and corners that will receive <u>SOPRASEAL® LM 202 VP</u> can also be treated by centering and embedding a 4in wide strip of SOPRASEAL® MESH in <u>SOPRASEAL® LM 202 VP</u>.
 - Control joints and gaps: For joints and gaps ¼ in wide and up to ½ in wide, install non-gassing polyethylene foam backer rod with a diameter 25 percent greater than the joint/gap width. Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> to ensure a 2:1 joint width-to-sealant depth/thickness ratio. Tool the <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> as indicated in detail drawings.
 - Expansion joints and drift joints: Building expansion joints and drift joints are designed and installed as specified for each project. Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL®</u> <u>SEALANT</u> to tie-in and seal to compatible expansion joint /drift joint materials. Contact SOPREMA for additional information.
 - Flashings: Fenestrations, penetrations and transition flashings: Refer to <u>Table 2.1g</u> and <u>Figures</u> <u>2.1n through 2.1z</u> for <u>SOPRASEAL® LM 202 VP</u> details.
- Wall substrate application:
 - Overlaps and tie-ins:
 - Ensure overlapping surfaces and joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust and debris using a clean dry cloth.
 - To clean surfaces, use isopropyl alcohol and a clean cloth. Do not use detergents or cleaning materials that leave a soapy or oily residue.
 - Use a ½ nap roller, paint brush, or spray equipment to apply <u>SOPRASEAL® LM 202 VP</u>.
 - As <u>SOPRASEAL® LM 202 VP</u> is applied, measure the wet mil thickness using a wet mil thickness gage during application to ensure the minimum thickness is maintained throughout the project.
 Coverage rates: Refer to Table 2.1e for SOPRASEAL® LM 202 VP coverage rates.
- Refer to <u>Table 2.1h</u> for vertical tie-ins between roofing, wall air barrier and foundation waterproofing materials.

Inspection:

- <u>SOPRASEAL[®] LM 202 VP</u> dries between 2 and 4 hours at 77°F (25°C) and 50% relative humidity.
- As materials are applied, inspect the application to ensure the applied materials are free of voids, pin holes, blisters or other deficiencies.
- Once dried, remove all delaminated, unadhered and blistered material. Apply additional <u>SOPRASEAL® LM 202 VP</u> as necessary to make repairs and correct all deficiencies.
- Inspect tie-ins to <u>SOPRASEAL® LM 202 VP</u> and tie-ins to other materials to ensure substrate conditions are clean and acceptable to proceed with work.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the materials with subsequent building systems.

Table 2.1e SOPRASEAL [®] LM 202 VP Coverage Rates				
Air Barrier	Air Barrier Substrate			
SOPRASEAL [®] LM 202 VP	Gypsum board	90 ft ² /gallon		
	Cement Board	100 ft ² /gallon		
	Plywood	53 ft ² /gallon		
	Oriented Strand Board (OSB)	53 ft ² /gallon		
	Concrete Masonry Units (CMU)	25-53 ft²/gallon		
	Concrete/masonry with masonry/block sealer	60 ft ² /gallon		

Table 2.1f <u>SOPRASEAL® LM 202 VP</u> Warranty Terms				
Form	Warranty Term	Air Barrier	Flashing	
Limited Warranty For Wall Products, Form W115	10 years	SOPRASEAL [®] LM 202 VP	SOPRASEAL [®] LIQUID FLASHING	

Contact SOPREMA for additional information.

Table 2.1g <u>SOPRASEAL® LM 202 VP</u> Details					
Air Barrier	Detail Name	Figure			
	Sheathing Joint Treatment	Sheathing	<u>2.1n</u>		
	Corpore	Sheathing	<u>2.10</u>		
	corners	Masonry	<u>2.1u</u>		
	Control Joint	Sheathing	<u>2.1p</u>		
	Control Joint	Masonry	<u>2.1v</u>		
	Fenestration	Sheathing	<u>2.1q</u>		
SOPRASEAL [®] LM 202 VP		Masonry	<u>2.1w</u>		
	Depatration	Sheathing	<u>2.1r</u>		
	Penetration	Masonry	<u>2.1x</u>		
		Sheathing	<u>2.1s</u>		
		Masonry	<u>2.1y</u>		
	Wall and Foundation Junction	Sheathing	<u>2.1t</u>		
		Masonry	<u>2.1z</u>		

Table 2.1h SOPRASEAL® LM 202 VP Vertical Tie-In			
Adjacent Membrane	Tie-In	Notes	
SENTINEL PVC roofing (bareback)	A	Seal PVC roofing membrane to cured <u>SOPRASEAL® LM 202 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (burn-off film underside)	A	Remove burn-off film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 202 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen (self-adhered underside)	A	Remove release film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 202 VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (sanded underside)	А	Seal modified bitumen roofing membrane to cured <u>SOPRASEAL® LM 202</u> <u>VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen flashings	В	Install termination bar at leading edge of SBS modified bitumen flashings. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 202 VP</u> to termination bar.	
ALSAN [®] RS 230 FLASH or ALSAN [®] RS 260 LO FLASH	С	Extend <u>SOPRASEAL® LM 202 VP</u> onto <u>ALSAN® RS 230 FLASH</u> or <u>ALSAN® RS</u> <u>260 LO FLASH</u> .	
<u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> foundation blindside waterproofing	В	Adhere <u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> to wall with <u>COLPHENE®</u> <u>BARR FLASHING</u> and install termination bar at leading edge. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fastener heads. Extend <u>SOPRASEAL® LM 202 VP</u> to termination bar.	
COLPHENE [®] 3000 or COLPHENE [®] ICF foundation waterproofing	В	Install termination bar at leading edge of <u>COLPHENE® 3000</u> or <u>COLPHENE®</u> <u>ICF</u> . Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 202 VP</u> to termination bar.	
COLPHENE® LM BARR or COLPHENE® LM BARR SPRAY foundation waterproofing	С	Extend <u>SOPRASEAL® LM 202 VP</u> onto <u>COLPHENE® LM BARR</u> or <u>COLPHENE®</u> <u>LM BARR SPRAY</u> .	
ALSAN® TRAFIK RS 730 FIELD or ALSAN® TRAFIK RS 730 FLASH	С	Extend <u>SOPRASEAL® LM 202 VP</u> onto <u>ALSAN® TRAFIK RS 730 FIELD</u> or <u>ALSAN® TRAFIK RS 730 FLASH</u> .	





Apply <u>SOPRASEAL® SEALANT</u> to seal all roof-to-wall and wall-to-foundation waterproofing transitions, terminations, and penetrations and as shown.



Figure 2.1n SOPRASEAL[®] LM 202 VP, Sheathing Joint Treatment



Figure 2.10 SOPRASEAL[®] LM 202 VP, Inside/Outside Corners On Sheathing



Figure 2.1p SOPRASEAL[®] LM 202 VP, Control Joint On Sheathing



Figure 2.1q SOPRASEAL[®] LM 202 VP, Fenestration On Sheathing



Figure 2.1r SOPRASEAL[®] LM 202 VP, Penetration On Sheathing




Figure 2.1u SOPRASEAL[®] LM 202 VP, Inside/Outside Corners On Masonry



Figure 2.1v SOPRASEAL[®] LM 202 VP, Control Joint On Masonry



Figure 2.1w SOPRASEAL® LM 202 VP, Fenestration On Masonry



Figure 2.1x SOPRASEAL® LM 202 VP, Penetration On Masonry





2.2 NON-PERMEABLE LIQUID-APPLIED WALL AIR BARRIERS

SOPRASEAL® LM 203

General:

- <u>SOPRASEAL® LM 203</u> is a non-permeable, one-component, water-based, non-flammable modified rubber chemistry, liquid-applied air barrier.
- Refer to the <u>SOPRASEAL® LM 203</u> Product Data Sheet (PDS) for material properties.
- Accessory Products:
 - SOPRASEAL[®] LIQUID FLASHING: Gun-grade, low-VOC, STPE/polyether-chemistry liquid flashing packaged in 20 oz sausage packs. SOPRASEAL[®] LIQUID FLASHING is applied to rough openings, joints, transitions, terminations and penetrations to create non-permeable seamless transitions. Used to flash and seal the air barrier to steel, aluminum, brick, concrete, wood, masonry, vinyl, brick ties and fasteners. Refer to the <u>SOPRASEAL[®] LIQUID FLASHING</u> Product Data Sheet (PDS) for material properties.
 - SOPRASEAL[®] MESH is a non-woven polyester fabric used to reinforce <u>SOPRASEAL[®] LM 203</u> where applied at joints, corners, transitions and terminations. Rolls measure 4, 6 and 9 in wide x 180 ft. long.



- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.
- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL[®] LM 203</u> Product Data Sheet (PDS) for material properties.
- Air barrier performance:
 - <u>SOPRASEAL® LM 203</u> is tested and evaluated in accordance with *the Air Barrier Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as listed on-line by ABAA. Refer to <u>www.airbarrier.org</u>.*

- <u>SOPRASEAL® LM 203</u> is tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- Water resistive barrier (WRB) performance:
 - SOPRASEAL[®] LM 203 is tested and evaluated for use as water resistive barriers (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services* Acceptance Criteria ICC-ES AC212: Acceptance Criteria for Water-Resistive Coatings Used as Water-Resistive Barriers over Exterior Sheathing.
- Fire performance:
 - <u>SOPRASEAL® LM 203</u> is evaluated by third-party engineering to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible. Contact Components. Contact <u>SOPREMA®</u> to obtain copies of NFPA 285 Evaluation Reports.
 - <u>SOPRASEAL® LM 203</u> meets Class A per ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

Preparation:

- Prepare substrates as required to install <u>SOPRASEAL® LM 203</u>. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.
- Ensure penetrations and transitions are clean, prepared and secured to prevent movement.
- Prepare all gaps and breaks between substrates and ensure they are prepared before applying <u>SOPRASEAL[®] LM 203</u> and related materials.
- Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to flash fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 203</u>. Refer to detail drawings.
- Adhesion tests:
 - Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where non-factory substrates are used and where substrate conditions vary.
 - Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.

Application:

- Refer to <u>SOPRASEAL® LM 203</u> Product Data Sheet (PDS) for application rate and mil thickness required for vapor permeance performance. Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> and <u>SOPRASEAL® SEALANT</u> to flash and seal substrates before installing <u>SOPRASEAL® LM 203</u>.
- Weather conditions:
 - Surfaces should be dry to the touch with no visible signs of moisture. Do not apply materials to wet surfaces, dew, frost or ice.
 - Ice and frost will prevent adhesion of <u>SOPRASEAL® LM 203</u>. During extended periods of cold weather examine substrates carefully to ensure there is not frost nor ice present.
 - Monitor substrate and material temperatures to ensure conditions remain satisfactory while applying <u>SOPRASEAL® LM 203</u>. Protect materials from weather-related damages.
 - During extended periods of cold weather, materials should be stored in a heated area and maintained at or above 70°F (21°C). Provide band-type drum and pail heaters designed to heat containers as necessary during cold weather.
 - Ensure the ambient temperature during application is 40°F (4°C) and rising.

- During hot, sunny weather, <u>SOPRASEAL® LM 203</u> may dry quickly. During hot, sunny conditions store materials in cool or shaded areas away from direct sunlight.
- Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application and cure time. Monitor project conditions and adjust application methods as necessary to accommodate changing weather conditions.
- Flashings & Sealants:
 - Pre-apply flashings and sealants to wall substrates, fenestrations, penetrations and transitions before applying the <u>SOPRASEAL® LM 203</u> to the wall substrates.
 - For flashings, apply <u>SOPRASEAL® LIQUID FLASHING</u> using a sausage-pack sealant gun. Use a flat blade putty knife/scraper to spread a uniform application to seal joints, fenestrations, penetrations and transitions before installing <u>SOPRASEAL® LM 203</u>.
 - Apply <u>SOPRASEAL® LIQUID FLASHING</u> at the thickness required for each detail as indicated herein. The minimum application thickness of <u>SOPRASEAL® LM 203</u> is 20 wet mils.
 - Apply <u>SOPRASEAL® SEALANT</u> using a 10 oz sealant gun to seal joints, edges and details as indicated and detailed herein.
 - Allow approximately 30 minutes or more for <u>SOPRASEAL® LIQUID FLASHING</u> to fully skin-over before applying <u>SOPRASEAL® LM 203</u>.
 - Wall substrate pre-treatment:
 - Fastener heads and other small voids: Pre-apply <u>SOPRASEAL® LIQUID FLASHING</u> to exposed fastener heads and small 1/8 in voids. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate.
 - Treat board joints, edges and corners by one of the following methods:
 - Apply <u>SOPRASEAL® LIQUID FLASHING</u> in a zigzag pattern extending a 1 to 2 in beyond both sides of joints and edges. Use a flat blade putty knife/scraper to spread a uniform application flush with the substrate to form a weather-tight seal.
 - Board joints, edges and corners that will receive <u>SOPRASEAL® LM 203</u> can also be treated by centering and embedding a 4in wide strip of SOPRASEAL® MESH in <u>SOPRASEAL® LM 203</u>.
 - Control joints and gaps: For joints and gaps ¼ in wide and up to ½ in wide, install non-gassing polyethylene foam backer rod with a diameter 25 percent greater than the joint/gap width.
 Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> to ensure a 2:1 joint width-to-sealant depth/thickness ratio. Tool the <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> as indicated in detail drawings.
 - Expansion joints and drift joints: Building expansion joints and drift joints are designed and installed as specified for each project. Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL®</u> <u>SEALANT</u> to tie-in and seal to compatible expansion joint /drift joint materials. Contact SOPREMA for additional information.
 - Flashings: Fenestrations, penetrations and transition flashings: Refer to <u>Table 2.2c</u> and <u>Figures</u> <u>2.2a through 2.2m</u> for <u>SOPRASEAL® LM 203</u> details.
- Wall substrate application:
 - Overlaps and tie-ins:
 - Ensure overlapping surfaces and joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust and debris using a clean dry cloth.
 - To clean surfaces, use isopropyl alcohol and a clean cloth. Do not use detergents or cleaning materials that leave a soapy or oily residue.
 - Use a ½ nap roller, paint brush, or spray equipment to apply <u>SOPRASEAL® LM 203</u>.
 - As <u>SOPRASEAL® LM 203</u> is applied, measure the wet mil thickness using a wet mil thickness gage during application to ensure the minimum thickness is maintained throughout the project.
 - Coverage rates: Refer to <u>Table 2.2a</u> for <u>SOPRASEAL® LM 203</u> coverage rates.

• Refer to <u>Table 2.2d</u> for vertical tie-ins between roofing, air barrier and foundation waterproofing materials.

Inspection:

- <u>SOPRASEAL[®] LM 203</u> dries between 2 and 4 hours at 77°F (25°C) and 50% relative humidity.
- As materials are applied, inspect the application to ensure the applied materials are free of voids, pin holes, blisters or other deficiencies.
- Once dried, remove all delaminated, unadhered and blistered material. Apply additional <u>SOPRASEAL® LM 203</u> as necessary to make repairs and correct all deficiencies.
- Inspect tie-ins to <u>SOPRASEAL® LM 203</u> and tie-ins to other materials to ensure substrate conditions are clean and acceptable to proceed with work.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the materials with subsequent building systems.

Table 2.2a <u>SOPRASEAL[®] LM 203</u> Substrate Coverage Rates						
Air Barrier	rrier Substrate Coverage Rate					
<u>SOPRASEAL® LM 203</u>	Gypsum board	58 ft ² /gallon				
	Cement Board	58 ft²/gallon				
	Plywood	53 ft²/gallon				
	Oriented Strand Board (OSB)	53 ft ² /gallon				
	Concrete Masonry Units (CMU)	46 ft²/gallon				
	Concrete/masonry with masonry/block sealer	60 ft²/gallon				

Table 2.2b <u>SOPRASEAL[®] LM 203</u> Warranty Terms				
Form	Warranty Term	Air Barrier	Flashing	
Limited Warranty For Wall Products, Form W115	10 years	SOPRASEAL [®] LM 203	SOPRASEAL [®] LIQUID FLASHING	

Contact SOPREMA for additional information.

Table 2.2c <u>SOPRASEAL® LM 203</u> Details				
Air Barrier	Detail Name	Figure		
	Sheathing Joint Treatment	Sheathing	<u>2.2a</u>	
	Corpore	Sheathing	<u>2.2b</u>	
	corners	Masonry	<u>2.2h</u>	
	Control Joint	Sheathing	<u>2.2c</u>	
	Control Joint	Masonry	<u>2.2i</u>	
SOPRASEAL [®] LM 203	Expectration	Sheathing	<u>2.2d</u>	
	renestration	Masonry	<u>2.2j</u>	
	Depatration	Sheathing	<u>2.2e</u>	
	Penetration	Masonry	<u>2.2k</u>	
	Wall and Roof Junction	Sheathing	<u>2.2f</u>	
		Masonry	<u>2.21</u>	
	Wall and Foundation Junction	Sheathing	<u>2.2g</u>	
		Masonry	<u>2.2m</u>	

	Table 2.2d <u>SOPRASEAL® LM 203</u> Vertical Tie-In			
Adjacent Membrane	Tie-In	Notes		
SENTINEL PVC roofing (bareback)	A	Seal PVC roofing membrane to cured <u>SOPRASEAL® LM 203</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.		
SOPREMA SBS modified bitumen (burn-off film underside)	А	Remove burn-off film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 203</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .		
SOPREMA SBS modified bitumen (self-adhered underside)	A	Remove release film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to cured <u>SOPRASEAL® LM 203</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.		
SOPREMA SBS modified bitumen (sanded underside)	А	Seal modified bitumen roofing membrane to cured <u>SOPRASEAL® LM 203</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .		
SOPREMA SBS modified bitumen flashings	В	Install termination bar at leading edge of SBS modified bitumen flashings. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 203</u> to termination bar.		
ALSAN® RS 230 FLASH or ALSAN® RS 260 LO FLASH	С	Extend <u>SOPRASEAL® LM 203</u> onto <u>ALSAN® RS 230 FLASH</u> or <u>ALSAN® RS 260</u> <u>LO FLASH</u> .		
<u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> foundation blindside waterproofing	В	Adhere <u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> to wall with <u>COLPHENE®</u> <u>BARR FLASHING</u> and install termination bar at leading edge. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fastener heads. Extend <u>SOPRASEAL® LM 203</u> to termination bar.		
COLPHENE [®] 3000 or COLPHENE [®] ICF foundation waterproofing	В	Install termination bar at leading edge of <u>COLPHENE® 3000</u> or <u>COLPHENE®</u> <u>ICF</u> . Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners. Extend <u>SOPRASEAL® LM 203</u> to termination bar.		
COLPHENE® LM BARR or COLPHENE® LM BARR SPRAY foundation waterproofing	С	Extend <u>SOPRASEAL® LM 203</u> onto <u>COLPHENE® LM BARR</u> or <u>COLPHENE® LM</u> <u>BARR SPRAY</u> .		
ALSAN® TRAFIK RS 730 FIELD or ALSAN® TRAFIK RS 730 FLASH	С	Extend <u>SOPRASEAL® LM 203</u> onto <u>ALSAN® TRAFIK RS 730 FIELD</u> or <u>ALSAN®</u> <u>TRAFIK RS 730 FLASH</u> .		



Apply <u>SOPRASEAL® SEALANT</u> to seal all roof-to-wall and wall-to-foundation waterproofing transitions, terminations, and penetrations and as shown.



Figure 2.2a SOPRASEAL[®] LM 203, Sheathing Joint Treatment



Figure 2.2b SOPRASEAL[®] LM 203, Inside/Outside Corners On Sheathing



Figure 2.2c SOPRASEAL® LM 203, Control Joint On Sheathing



Figure 2.2d <u>SOPRASEAL[®] LM 203</u>, Fenestration On Sheathing



Figure 2.2f SOPRASEAL[®] LM 203, Wall And Roof Junction On Sheathing



Figure 2.2h SOPRASEAL[®] LM 203, Inside/Outside Corners On Masonry



Figure 2.2i SOPRASEAL[®] LM 203, Control Joint On Masonry



Figure 2.2j <u>SOPRASEAL® LM 203</u>, Fenestration On Masonry



Figure 2.2k SOPRASEAL® LM 203, Penetration On Masonry



Figure 2.2I SOPRASEAL® LM 203, Wall And Roof Junction On Masonry



3 SELF ADHESIVE-APPLIED WALL AIR BARRIERS

3.1 VAPOR PERMEABLE SELF ADHESIVE-APPLIED WALL AIR BARRIERS

SOPRASEAL® STICK VP

General:

- <u>SOPRASEAL® STICK VP</u> is a 24 mil (0.6 mm) thick, vapor-permeable, self-adhesive air barrier composed of a tri-laminate polypropylene-composite facer coated with a high-tack self-adhesive backing protected by a silicone release film. Rolls measure 37.4 in (0.95 m) wide x 98.4 ft (30.0 m) long. Refer to the <u>SOPRASEAL® STICK VP</u> product data sheet (PDS) for vapor permeance values and other material properties.
- Accessory Products:
 - <u>SOPRASEAL® STICK FLASHPRO</u>: 17 mil (0.43 mm) non-permeable flashing accessory consisting of butyl adhesive backing with a HDPE composite facer. Used to seal rough openings, transitions, terminations and penetrations where applicable. Rolls measure 4, 6, 9, 12 and 18 in wide x 33 ft. long. Refer to the <u>SOPRASEAL® STICK</u> <u>FLASHPRO</u> Product Data Sheet (PDS) for material properties.
 - <u>SOPRASEAL® LIQUID FLASHING</u>: Gun-grade, low-VOC, STPE/polyether-chemistry liquid flashing packaged in 20 oz sausage packs. <u>SOPRASEAL® LIQUID FLASHING</u> is applied to rough openings, joints, transitions, terminations and penetrations to create nonpermeable seamless transitions. Used to flash and seal the air barrier to steel, aluminum, brick, concrete, wood, masonry, vinyl, PVC, brick ties and fasteners. Refer to the <u>SOPRASEAL® LIQUID</u> <u>FLASHING</u> Product Data Sheet (PDS) for material properties.
 - <u>SOPRASEAL® SEALANT</u>: Gun-grade, low VOC, solvent-free, polyether adhesive-sealant packaged in 10.1 oz tubes and 20 oz sausages.
 <u>SOPRASEAL® SEALANT</u> is applied to seal transitions, terminations and penetrations. Refer to the <u>SOPRASEAL® SEALANT</u> Product Data Sheet (PDS) for material properties.



- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.
- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL® STICK VP</u> Product Data Sheet (PDS) for material properties.
- Air barrier performance:
 - <u>SOPRASEAL® STICK VP</u> is tested and evaluated in accordance with *the Air Barrier Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as approved and published on-line by ABAA. Refer to <u>www.airbarrier.org</u>.*
 - SOPRASEAL[®] STICK VP is tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- Water resistive barrier (WRB) performance:
 - <u>SOPRASEAL® STICK VP</u> is tested and evaluated for use as water resistive barriers (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services* Acceptance Criteria 38 (ICC-ES AC38): Acceptance Criteria for Water-Resistive Barriers. Refer to the wall air barrier product data sheet (PDS) or contact SOPREMA® for specific material and system properties.
- Fire performance:
 - <u>SOPRASEAL® STICK VP</u> is include in third-party engineering evaluation reports to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. Contact <u>SOPREMA®</u> to obtain copies of NFPA 285 Evaluation Reports.
 - <u>SOPRASEAL® STICK VP</u> meets Class A per ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.

Preparation:

- Prepare substrates as required to install <u>SOPRASEAL® STICK VP</u>. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.
- Ensure penetrations and transitions are clean, prepared and secured to prevent movement, and all
 gaps and breaks between substrates are properly sealed before applying <u>SOPRASEAL® STICK VP</u> air
 barrier and related accessory materials.
- Laps, joints and tie-ins:
 - Ensure overlapping surfaces and joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust using a clean dry cloth.
 - To clean film surfaces, use isopropyl alcohol and a clean cloth. Do not use detergents or cleaning materials that leave a soapy or oily residue.
- Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where non-factory substrates are used, where substrate conditions vary and/or where the quality of adhesion is suspect.
 - Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 - Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.

Application:

- Apply <u>SOPRASEAL® STICK VP</u> self-adhesive sheets to wall substrates as indicated herein and show on details drawings.
- Once <u>SOPRASEAL® STICK VP</u> is in place, post-apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL®</u> <u>STICK FLASHPRO</u> to flash and seal the <u>SOPRASEAL® STICK VP</u> at wall fenestrations, penetrations, transitions and terminations.

- Apply <u>SOPRASEAL® SEALANT</u> to seal the edges of <u>SOPRASEAL® STICK VP</u> at all reverse/back-water laps.
- Weather conditions:
 - The application temperature range for <u>SOPRASEAL® STICK VP</u> is 19°F to 104°F (-7.2°C to 40°C).
 - Substrate surfaces should be dry to the touch with no visible signs of moisture. Do not apply materials to wet surfaces, dew, frost or ice.
 - The ambient temperature should be well above the dew point temperature, with no dew, fog or condensation present.
 - Monitor substrate and material temperatures to ensure conditions remain satisfactory while applying the primer and air barrier. Protect materials from weather-related damages.
 - Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application. Monitor the application and adjust application methods as necessary to accommodate changing weather conditions.
- Wall substrate application:
 - Install the <u>SOPRASEAL® STICK VP</u> self-adhesive sheets to create a continuous seal for walls and at transitions.
 - Position the sheet in place on the prepared wall substate.
 - Ensure sheets are aligned with adjacent sheets to provide minimum 2 in side-laps, 3 in end-laps, and over-laps onto adjoining materials as noted on detail drawings.
 - Partially remove the release film from the back of the self-adhesive sheet and adhere the leading edge in place.
 - Slowly remove the release film while applying pressure to the surface of the sheet to adhere the sheet in place and prevent trapped air pockets beneath the sheet.
 - Once the sheet is in place, use pressure to roll-in the entire sheet using a hard roller. Use the roller to remove all air bubbles and wrinkles.
- Flashings & Sealants:
 - Post-applied flashings are recommended for <u>SOPRASEAL® STICK VP</u>.
 - Flash <u>SOPRASEAL® STICK VP</u> weather-tight at sheet terminations within 24 hours, and before exposure to inclement weather conditions.
 - Flash and seal all <u>SOPRASEAL® STICK VP</u> transitions, terminations and penetrations using one or more of the following methods:
 - <u>SOPRASEAL® STICK FLASHPRO</u>: Install gussets to seal corners. Strip-in and seal all nonpermeable flashing details at rough openings, transitions, terminations and penetrations. Seal all reverse/back-water laps, laps on horizontal/flat surfaces, and other critical lap areas using <u>SOPRASEAL® SEALANT</u>. Refer to detail drawings.
 - <u>SOPRASEAL® LIQUID FLASHING</u>: When installing the <u>SOPRASEAL® STICK VP</u> sheets, leave a minimum of 1 in of wall substrate exposed where the <u>SOPRASEAL® STICK VP</u> sheet terminates. Apply <u>SOPRASEAL® LIQUID FLASHING</u> in a zig zag pattern over the <u>SOPRASEAL®</u> <u>STICK VP</u> and onto the adjacent exposed substrate. Using a flat blade putty knife/scraper to spread a uniform application of <u>SOPRASEAL® LIQUID FLASHING</u> to flash the <u>SOPRASEAL®</u> <u>STICK VP</u> sheet at fenestrations, penetrations and transitions. Ensure <u>SOPRASEAL® LIQUID</u> <u>FLASHING</u> overlaps 3 in onto the <u>SOPRASEAL® STICK VP</u>. The minimum application thickness of <u>SOPRASEAL® LIQUID FLASHING</u> is 20 wet mils. Refer to detail drawings.
 - For other flashing options, contact SOPREMA.
 - <u>SOPRASEAL® SEALANT</u>: Seal all <u>SOPRASEAL® STICK VP</u> and <u>SOPRASEAL® STICK FLASHPRO</u> reverse/back-water laps, and all laps on horizontal/flat surfaces using <u>SOPRASEAL® SEALANT</u>. Refer to detail drawings.
 - Control joints and gaps: For joints and gaps ¼ in wide and up to ½ in wide, install non-gassing polyethylene foam backer rod with a diameter 25 percent greater than the joint/gap width.
 Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> to ensure a 2:1 joint width-to-

sealant depth/thickness ratio. Tool the <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL® SEALANT</u> as indicated in detail drawings.

- Expansion joints and drift joints: Building expansion joints and drift joints are designed and installed as specified for each project. Apply <u>SOPRASEAL® LIQUID FLASHING</u> or <u>SOPRASEAL®</u> <u>SEALANT</u> to tie-in and seal to compatible expansion joint /drift joint materials. Contact SOPREMA for additional information.
- Refer to <u>Table 3.1b</u> and <u>Figures 3.1a through 3.1k</u> for <u>SOPRASEAL® STICK VP</u> air barrier details.
- Refer to <u>Table 3.1c</u> for vertical tie-ins between roofing, wall air barrier and foundation waterproofing materials.

Inspection:

- As materials are applied, inspect the application to ensure the applied materials are free of deficiencies.
- Exposure: Once installed and flashed, <u>SOPRASEAL® STICK VP</u> may exposed for up to 180 days. Due to the wide range of weather-related exposures and building conditions, the effects on <u>SOPRASEAL®</u> <u>STICK VP</u> vary from project to project.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the air barrier with subsequent building systems, flashings, insulation, wall cladding, etc.
- Repairs may be made using *application* techniques described above.

Table 3.1a <u>SOPRASEAL® STICK VP</u> Warranty Terms			
Form Warranty Term Air Barrier Flashing			
Limited Warranty For Wall Products, Form W115	10 years	SOPRASEAL [®] STICK VP	SOPRASEAL [®] LIQUID FLASHING
			SOPRASEAL® STICK FLASHPRO

Contact SOPREMA for additional information.

Table 3.1b <u>SOPRASEAL® STICK VP</u> Details					
Air Barrier	Detail Name Substrate Flashing Material			Figure	
	Corpors	Shoothing	SOPRASEAL [®] STICK FLASHPRO	<u>3.1a</u>	
	corners	Sneatning	SOPRASEAL [®] LIQUID FLASHING	<u>3.1b</u>	
	Control Joint	Shoothing	SOPRASEAL [®] STICK FLASHPRO	<u>3.1c</u>	
<u>SOPRASEAL® STICK VP</u>	Control Joint	Sheathing	SOPRASEAL [®] LIQUID FLASHING	<u>3.1d</u>	
	Fenestration	Sheathing	SOPRASEAL [®] STICK FLASHPRO	<u>3.1e</u>	
			SOPRASEAL [®] LIQUID FLASHING	<u>3.1f</u>	
	Depatration	Shoothing	SOPRASEAL [®] STICK FLASHPRO	<u>3.1g</u>	
	Penetration	Sileatining	SOPRASEAL [®] LIQUID FLASHING	<u>3.1h</u>	
	Wall and Roof Junction	Sheathing	n/a	<u>3.1i</u>	
	Wall and Foundation	Shoothing	SOPRASEAL [®] STICK FLASHPRO	<u>3.1j</u>	
	Junction	Sileatillig	SOPRASEAL [®] LIQUID FLASHING	<u>3.1k</u>	

Table 3.1c SOPRASEAL® STICK VP Vertical Tie-In			
Adjacent Membrane	Tie-In	Notes	
SENTINEL PVC roofing (bareback)	A	Adhere PVC roofing membrane to <u>SOPRASEAL® STICK VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (burn-off film underside)	A	Remove burn-off film from the underside of the modified bitumen roofing membrane. Adhere roofing membrane to <u>SOPRASEAL® STICK VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen (self-adhered underside)	A	Remove release film from the underside of the modified bitumen roofing membrane. Adhere roofing membrane to <u>SOPRASEAL® STICK VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (sanded underside)	А	Adhere modified bitumen roofing membrane to <u>SOPRASEAL® STICK VP</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen flashings	В	Install termination bar at leading edge of SBS modified bitumen flashings. Extend <u>SOPRASEAL® STICK VP</u> to termination bar. Apply <u>SOPRASEAL®</u> <u>SEALANT</u> to both sides of termination bar and fasteners.	
ALSAN [®] RS 230 FLASH or ALSAN [®] RS 260 LO FLASH	С	Extend <u>SOPRASEAL® STICK VP</u> to <u>ALSAN® RS 230 FLASH</u> or <u>ALSAN® RS 260</u> <u>LO FLASH</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL® STICK VP</u> and roofing/waterproofing.	
<u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> foundation blindside waterproofing	В	Adhere <u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> to wall with <u>COLPHENE®</u> <u>BARR FLASHING</u> and install termination bar at leading edge. Extend <u>SOPRASEAL® STICK VP</u> to termination bar. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fastener heads.	
COLPHENE® 3000 or COLPHENE® ICF foundation waterproofing	В	Install termination bar at leading edge of <u>COLPHENE® 3000</u> or <u>COLPHENE®</u> <u>ICF</u> . Extend <u>SOPRASEAL® STICK VP</u> to termination bar. Apply <u>SOPRASEAL®</u> <u>SEALANT</u> to both sides of termination bar and fasteners.	
COLPHENE® LM BARR or COLPHENE® LM BARR SPRAY foundation waterproofing	С	Extend <u>SOPRASEAL® STICK VP</u> to <u>COLPHENE® LM BARR</u> or <u>COLPHENE® LM</u> <u>BARR SPRAY</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL® STICK</u> <u>VP</u> and foundation waterproofing.	
ALSAN® TRAFIK RS 730 FIELD or ALSAN® TRAFIK RS 730 FLASH	С	Extend <u>SOPRASEAL® STICK VP</u> to <u>ALSAN® TRAFIK RS 730 FIELD</u> or <u>ALSAN®</u> <u>TRAFIK RS 730 FLASH</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL® STICK VP</u> and roofing/waterproofing.	



Apply <u>SOPRASEAL® SEALANT</u> to seal all roof-to-wall and wall-to-foundation waterproofing transitions, terminations, and penetrations and as shown.



Figure 3.1a <u>SOPRASEAL® STICK VP</u>, Corners With <u>SOPRASEAL® STICK FLASHPRO</u> On Sheathing



Figure 3.1b <u>SOPRASEAL® STICK VP</u>, Corners With <u>SOPRASEAL® LIQUID FLASHING</u> On Sheathing



Figure 3.1c SOPRASEAL® STICK VP, Control Joint With SOPRASEAL® STICK FLASHPRO On Sheathing



Figure 3.1d SOPRASEAL® STICK VP, Control Joint With SOPRASEAL® LIQUID FLASHING On Sheathing



Figure 3.1e SOPRASEAL® STICK VP, Fenestration With SOPRASEAL® STICK FLASHPRO On Sheathing



Figure 3.1f <u>SOPRASEAL® STICK VP</u>, Fenestration With <u>SOPRASEAL® LIQUID FLASHING</u> On Sheathing



Figure 3.1g SOPRASEAL® STICK VP, Penetration With SOPRASEAL® STICK FLASHPRO On Sheathing



Figure 3.1h SOPRASEAL® STICK VP, Penetration With SOPRASEAL® LIQUID FLASHING On Sheathing



Sheathing



Sheathing

3.2 NON-PERMEABLE SBS SELF-ADHESIVE APPLIED WALL AIR BARRIERS

SOPRASEAL® STICK 1100T

General:

- <u>SOPRASEAL® STICK 1100T</u> is a 40 mil (1 mm) non-permeable air barrier sheet consisting of SBS modified bitumen self-adhesive with a woven polyethylene composite facer. Rolls measure 36 in (0.9 m) wide x 75 ft (22.9 m) long. It is available in winter grade and summer grade. The application temperature for winter grade is between 14° and 50°F (-10° and 10°C), the application temperature for summer grade is between 50° and 122°F (10° and 50°C).
- Accessory rolls are pre-cut to measure 6, 9, 12 and 18 in wide x 75 ft. long. Refer to the <u>SOPRASEAL® STICK 1100T</u> Product Data Sheet (PDS) for material properties.
- Accessory Products:
 - <u>ELASTOCOL[™] STICK, ELASTOCOL[™] STICK ZERO</u>, and <u>ELASTOCOL[™]</u> <u>STICK H20</u> self-adhesive primers are applied to wall substrates to adhere <u>SOPRASEAL[®] STICK 1100T</u> and <u>SOPRASOLIN HD</u>. Refer to <u>Section 1.2</u> for primer information.
 - <u>SOPRASEAL® STICK FLASHPRO</u> is a 17 mil (0.43 mm) non-permeable flashing accessory sheet consisting of butyl adhesive backing with a HDPE composite facer. Used to seal rough openings, transitions, terminations and penetrations. Rolls measure 4, 6, 9, 12 and 18 in wide x 33 ft. long. Refer to the <u>SOPRASEAL® STICK FLASHPRO</u> Product Data Sheet (PDS) for material properties.



- <u>SOPRASOLIN HD</u> is a 40 mil (1 mm) non-permeable air barrier sheet consisting of SBS modified bitumen self-adhesive with an aluminum foil film facer. Rolls measure 39.4 in (1.0 m) wide x 32.8 ft (10 m) long. Accessory rolls are pre-cut and measure 4.3, 6.7, 9.8 and 13 in wide x 33 ft. long. Refer to the <u>SOPRASOLIN HD</u> Product Data Sheet (PDS) for material properties.
- <u>SOPRASEAL® SEALANT</u>: Gun-grade, low VOC, solvent-free, polyether adhesive-sealant packaged in 10.1 oz tubes and 20 oz sausages. <u>SOPRASEAL® SEALANT</u> is applied to seal transitions, terminations and penetrations. Refer to the <u>SOPRASEAL® SEALANT</u> Product Data Sheet (PDS) for material properties.
- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.
- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before applying air barrier materials and accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL® STICK 1100T</u> Product Data Sheet (PDS) for material properties.
- Air barrier performance:
 - <u>SOPRASEAL® STICK 1100T</u> is tested and evaluated in accordance with *the Air Barrier Association* of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies, as approved and published on-line by ABAA. Refer to <u>www.airbarrier.org</u>.
 - <u>SOPRASEAL® STICK 1100T</u> is tested and evaluated by an accredited third-party laboratory in accordance with ASTM E 2178: Standard Test Method for Air Permeance of Building Materials and ASTM E 2357: Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.
- Water resistive barrier performance:
 - SOPRASEAL® STICK 1100T is tested and evaluated for use as water resistive barriers (WRB's) by an accredited third-party laboratory per *The International Code Council Evaluation Services Acceptance Criteria 38 (ICC-ES AC38): Acceptance Criteria for Water-Resistive Barriers.* Refer to each wall air barrier product data sheet (PDS) or contact SOPREMA® for specific material and system properties.
- Fire performance:
 - <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u> are included in third-party engineering evaluation reports to demonstrate compliance with The National Fire Protection Association (*NFPA*) 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Wall Assemblies Containing Combustible Components. Contact SOPREMA® to obtain copies of NFPA 285 Engineering Evaluation Reports.

Preparation:

- Prepare wall substrates as required. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.
- Prime all substrates to receive <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u> self-adhesive SBS modified bitumen sheets. Primer options consist of <u>ELASTOCOL™ STICK</u>, <u>ELASTOCOL™ STICK ZERO</u>, or <u>ELASTOCOL™ STICK H20</u> SBS modified bitumen self-adhesive primers. Refer to primer product data sheets (PDS) for application rates. The SBS modified bitumen self-adhesive primers are not used for <u>SOPRASEAL® STICK FLASHPRO</u> butyl-backed self-adhesive flashings.
- Prepare flashing substrates to ensure penetrations and transitions are clean and secured to prevent movement, and all gaps and breaks between substrates are properly sealed before applying SOPRASEAL® STICK 1100T and related accessory materials.
- Laps, joints and tie-ins:
 - Ensure overlapping surfaces and joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust and debris using a clean dry cloth.
 - To clean film surfaces, use isopropyl alcohol and a clean cloth. Do not use detergents or cleaning materials that leave a soapy or oily residue.
 - Prime the <u>SOPRASEAL® STICK 1100T</u> film surface at laps and tie-ins using <u>ELASTOCOL™ STICK</u> or <u>ELASTOCOL™ STICK ZERO</u> for optimum adhesion. Priming the film surface at laps is optional when applying to new, clean <u>SOPRASEAL® STICK 1100T</u> film surfaces.
 - <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u> consist of self-adhesive SBS modified bitumen. The SBS modified bitumen should not overlap onto SOPREMA® SENTINEL® PVC and KEE roofing and flashing materials. When self-adhesive SBS modified bitumen is adhered directly to SENTINEL® roofing and flashing materials, the SBS self-adhesive backing will become soft and may liquify.
- Conduct adhesion testing where specified or otherwise required for the project. Adhesion tests are encouraged where non-factory substrates are used, where substrate conditions vary and/or where the quality of adhesion is suspect.

- Refer to ABAA T0002: Standard Test Method for Pull-Off Strength of Adhered Air and Water Resistive Barriers Using an Adhesion Tester or ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- Conduct testing and report findings in accordance with the test standard. Results should be 16 psi or greater.

Application:

- Ensure all substrate surfaces have been primed and the primer is still tacky, not wet, before installing <u>SOPRASEAL® STICK 1100T</u> or <u>SOPRASOLIN HD</u> self-adhesive SBS modified bitumen sheets.
- Apply <u>SOPRASEAL® STICK 1100T</u> sheets to wall substrates as indicated herein and as shown on details drawings.
- Once <u>SOPRASEAL® STICK 1100T</u> is in place on the wall substrates, post-apply the flashings. Flashings may also be pre-applied where desired.
- Flashings options include <u>SOPRASEAL® STICK 1100T</u>, <u>SOPRASEAL® STICK FLASHPRO</u> or <u>SOPRASOLIN</u> <u>HD</u> sheets that are field-fabricated to flash wall fenestrations, penetrations, transitions and terminations.
- Apply <u>SOPRASEAL® SEALANT</u> along the sheet edges to seal all reverse/back-water laps and horizontal laps on flat surfaces for <u>SOPRASEAL® STICK 1100T</u>, <u>SOPRASOLIN HD</u> and <u>SOPRASEAL® STICK</u> FLASHPRO.
- Weather conditions:
 - <u>SOPRASEAL® STICK 1100T</u> is available in a winter grade and a summer grade. The application temperature should be between 14° and 50°F (-10° and 10°C) for the winter grade and between 50° and 122°F (10° and 50°C) for the summer grade.
 - Refer to <u>Section 1.2</u> for self-adhesive primer requirements. Apply primer to all substrates.
 - Substrate surfaces should be dry to the touch with no visible signs of moisture. Do not apply materials to wet surfaces, dew, frost or ice.
 - The ambient temperature should be well above the dew point temperature, with no dew, fog or condensation present.
 - Monitor substrate and material temperatures to ensure conditions remain satisfactory while applying the primer and air barrier. Protect materials from weather-related damages.
 - Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application. Monitor the application and adjust application methods as necessary to accommodate changing weather conditions.
- Wall substrate application:
 - Install the self-adhesive SBS modified bitumen sheets to primed substrates to create a continuous seal for walls and all transitions.
 - Position the sheet in place on the primed substate.
 - Ensure sheets are aligned with adjacent sheets to provide minimum 2 in side-laps, 3 in end-laps, and over-laps onto adjoining materials as noted on detail drawings.
 - Partially remove the release film from the back of the self-adhesive sheet and adhere the leading edge in place.
 - Slowly remove the release film while applying pressure to the surface of the sheet to adhere the sheet in place and prevent trapped air pockets beneath the sheet.
 - Once the sheet is in place, roll the entire sheet using a hard roller to adhere the air barrier firmly in place.
 - Apply <u>SOPRASEAL® SEALANT</u> to seal details, reverse laps and critical areas.
- Flashings & Sealants:
 - Post-applied flashings are recommended for <u>SOPRASEAL® STICK 1100T</u>. Pre-applied flashings are optional.

- Flash <u>SOPRASEAL® STICK 1100T</u> sheets weather-tight at sheet terminations within 24 hours, and before exposure to inclement weather conditions.
- Flash and seal all <u>SOPRASEAL® STICK 1100T</u> transitions, terminations and penetrations using one or more of the following methods:
 - <u>SOPRASEAL® STICK 1100T</u> and <u>SOPRASOLIN HD</u>: Prime substrates using <u>ELASTOCOL™ STICK</u> or <u>ELASTOCOL™ STICK ZERO</u> SBS self-adhesive primer. Install gussets to seal corners. Stripin and seal all non-permeable flashing details at rough openings, transitions, terminations and penetrations. Seal all reverse/back-water laps, laps on horizontal/flat surfaces, and other critical lap areas using <u>SOPRASEAL® SEALANT</u>. Refer to detail drawings.
 - <u>SOPRASEAL® STICK FLASHPRO</u>: Install gussets to seal corners. Strip-in and seal all nonpermeable flashing details at rough openings, transitions, terminations and penetrations. Seal all reverse/back-water laps, laps on horizontal/flat surfaces, and other critical lap areas using <u>SOPRASEAL® SEALANT</u>. Refer to detail drawings.
- Flash and seal all penetrations, transitions and terminations. Refer to <u>Table 3.2b</u> and <u>Figures 3.2a</u> <u>through 3.2l</u> for non-permeable, self-adhesive-applied wall air barrier details.
- Refer to <u>Table 3.2c</u> for vertical tie-ins between roofing, wall air barrier and foundation waterproofing materials.

Inspection:

- As materials are applied, inspect the application to ensure the applied materials are fully adhered, and free of open laps and other deficiencies.
- Exposure: Once installed and flashed, <u>SOPRASEAL® STICK 1100T</u> may exposed for up to 90 days. Due to the wide range of weather-related exposures and building conditions, the effects on <u>SOPRASEAL®</u> <u>STICK 1100T</u> vary from project to project.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the air barrier with subsequent building systems, flashings, insulation, wall cladding, etc.
- Repairs may be made using *application* techniques described above.

Table 3.2a <u>SOPRASEAL® STICK 1100T</u> Warranty Terms			
Form	Warranty Term	Air Barrier	Flashing
Limited Warranty For Wall Products, Form W115	10 years		SOPRASEAL [®] STICK 1100T
		SOPRASEAL [®] STICK 1100T	SOPRASEAL [®] STICK FLASHPRO
			SOPRASOLIN HD

Contact SOPREMA for additional information.

Table 3.2b <u>SOPRASEAL® STICK 1100T</u> Details						
Air Barrier	Detail Name	Substrate	Flashing Material	Figure		
	Corners	Sheathing	Self Adhesive-Applied Air Barrier	<u>3.2a</u>		
		Masonry	Self Adhesive-Applied Air Barrier	<u>3.2h</u>		
	Control Joint	Sheathing	Self Adhesive-Applied Air Barrier	<u>3.2b</u>		
SOPRASEAL [®] STICK 1100T		Masonry	Self Adhesive-Applied Air Barrier	<u>3.2i</u>		
	Fenestration	Sheathing	Self Adhesive-Applied Air Barrier	<u>3.2c</u>		
		Masonry	Self Adhesive-Applied Air Barrier	<u>3.2j</u>		
	Penetration	Sheathing	Self Adhesive-Applied Air Barrier	<u>3.2d</u>		
		Masonry	Self Adhesive-Applied Air Barrier	<u>3.2k</u>		
	Wall and Roof Junction	Sheathing	n/a	<u>3.2e</u>		
		Masonry	n/a	<u>3.2l</u>		
	Wall and Foundation	Sheathing	Self Adhesive-Applied Air Barrier	<u>3.2f</u>		
	Junction	Masonry	Self Adhesive-Applied Air Barrier	<u>3.2</u>		

Table 3.2c <u>SOPRASEAL® STICK 1100T</u> Vertical Tie-In			
Adjacent Membrane	Tie-In	Notes	
SENTINEL PVC roofing (bareback)	A	Seal PVC roofing membrane to <u>SOPRASEAL® STICK 1100T</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (burn-off film underside)	А	Remove burn-off film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to <u>SOPRASEAL® STICK 1100T</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen (self-adhered underside)	А	Remove release film from the underside of the modified bitumen roofing membrane. Seal roofing membrane to <u>SOPRASEAL® STICK 1100T</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> . Secure the roofing through the 3in overlap shown by fastening a termination bar or the roof edge flashing system.	
SOPREMA SBS modified bitumen (sanded underside)	А	Adhere modified bitumen roofing membrane to <u>SOPRASEAL® STICK 1100T</u> with a continuous bead of <u>SOPRASEAL® SEALANT</u> .	
SOPREMA SBS modified bitumen flashings	В	Install termination bar at leading edge of SBS modified bitumen flashings. Extend <u>SOPRASEAL® STICK 1100T</u> to termination bar. Apply <u>SOPRASEAL®</u> <u>SEALANT</u> to both sides of termination bar and fasteners.	
ALSAN [®] RS 230 FLASH or ALSAN [®] RS 260 LO FLASH	с	Extend <u>SOPRASEAL® STICK 1100T</u> to <u>ALSAN® RS 230 FLASH</u> or <u>ALSAN® RS</u> <u>260 LO FLASH</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL® STICK</u> <u>1100T</u> and roofing/waterproofing.	
<u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> foundation blindside waterproofing	В	Adhere <u>COLPHENE® BSW-H</u> or <u>COLPHENE® BSW-V</u> to wall with <u>COLPHENE®</u> <u>BARR FLASHING</u> and install termination bar at leading edge. Extend <u>SOPRASEAL® STICK 1100T</u> to termination bar. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fastener heads.	
COLPHENE® 3000 or COLPHENE® ICF foundation waterproofing	В	Install termination bar at leading edge of <u>COLPHENE® 3000</u> or <u>COLPHENE®</u> <u>ICF</u> . Extend <u>SOPRASEAL® STICK 1100T</u> to termination bar. Apply <u>SOPRASEAL® SEALANT</u> to both sides of termination bar and fasteners.	
COLPHENE® LM BARR or COLPHENE® LM BARR SPRAY foundation waterproofing	С	Extend <u>SOPRASEAL® STICK 1100T</u> to <u>COLPHENE® LM BARR</u> or <u>COLPHENE®</u> <u>LM BARR SPRAY</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL®</u> <u>STICK 1100T</u> and foundation waterproofing.	
ALSAN [®] TRAFIK RS 730 FIELD or <u>ALSAN[®] TRAFIK RS 730</u> FLASH	с	Extend <u>SOPRASEAL® STICK 1100T</u> to <u>ALSAN® TRAFIK RS 730 FIELD</u> or <u>ALSAN® TRAFIK RS 730 FLASH</u> . Tool a bead of <u>SOPRASEAL® SEALANT</u> to <u>SOPRASEAL® STICK 1100T</u> and roofing/waterproofing.	




Apply <u>SOPRASEAL® SEALANT</u> to seal all roof-to-wall and wall-to-foundation waterproofing transitions, terminations, and penetrations and as shown. Do not apply self-adhesive SBS products directly onto SENTINEL® PVC and KEE roofing materials.



Figure 3.2a Non-Permeable Self Adhesive-Applied Air Barrier, Corners With Self Adhesive-Applied Air Barrier On Sheathing



Figure 3.2b Non-Permeable Self Adhesive-Applied Air Barrier, Control Joint With Self Adhesive-Applied Air Barrier On Sheathing



Figure 3.2c Non-Permeable Self Adhesive-Applied Air Barrier, Fenestration With Self Adhesive-Applied Air Barrier On Sheathing



Figure 3.2d Non-Permeable Self Adhesive-Applied Air Barrier, Penetration With Self Adhesive-Applied Air Barrier On Sheathing



Figure 3.2e Non-Permeable Self Adhesive-Applied Air Barrier, Wall And Roof Junction On Sheathing



Figure 3.2f Non-Permeable Self Adhesive-Applied Air Barrier, Wall And Foundation Junction On Sheathing



Figure 3.2g Non-Permeable Self Adhesive-Applied Air Barrier, Corners With Self Adhesive-Applied Air Barrier On Masonry



Figure 3.2h Non-Permeable Self Adhesive-Applied Air Barrier, Control Joint With Self Adhesive-Applied Air Barrier On Masonry



Figure 3.2i Non-Permeable Self Adhesive-Applied Air Barrier, Fenestration With Self Adhesive-Applied Air Barrier On Masonry



Figure 3.2j Non-Permeable Self Adhesive-Applied Air Barrier, Penetration With Self Adhesive-Applied Air Barrier On Masonry



Figure 3.2k Non-Permeable Self Adhesive-Applied Air Barrier, Wall And Roof Junction On Masonry



Figure 3.21 Non-Permeable Self Adhesive-Applied Air Barrier, Wall And Foundation Junction On Masonry

4 LAMINATED GYPSUM BOARD WALL AIR BARRIERS

4.1 NON-PERMEABLE SBS LAMINATED GYPSUM BOARD WALL AIR BARRIERS

SOPRASEAL® XPRESS G

General:

- <u>SOPRASEAL® XPRESS G</u> is an exterior grade, inorganic-faced gypsum core board with a factory-laminated air barrier exterior surface. The air barrier consists of non-permeable SBS modified bitumen with tri-laminate woven polyethylene film. Board sizes are 4 x 8 ft, available in ½ in or 5/8 in thicknesses. Refer to the <u>SOPRASEAL® XPRESS G</u> Product Data Sheet (PDS) for material properties.
- Boards are mechanically fastened to the structural framing. Fasteners, joints, transitions, terminations and penetrations are flashed and sealed using accessory products. Refer to detail drawings below.
- Accessory Products:
 - SOPRASEAL[®] XPRESS G SCREWS: Self-drilling #10-24 x 1-1/2 in long, flat Phillips head steel screws with an anti-corrosion coating specifically designed for fastening <u>SOPRASEAL[®] XPRESS G</u> boards to steel stud framing. Refer to project specifications for fastener spacing requirements.



- <u>SOPRASEAL® STICK 1100T</u> is a 40 mil (1 mm) non-permeable air barrier sheet consisting of SBS modified bitumen self-adhesive with a woven polyethylene composite facer. It is available in winter grade and summer grade. The application temperature for winter grade is between 14° and 50°F (-10° and 10°C), the application temperature for summer grade is between 50° and 122°F (10° and 50°C). Accessory cut rolls measure 6, 9, 12 and 18 in wide x 75 ft. long. Refer to the <u>SOPRASEAL® STICK 1100T</u> Product Data Sheet (PDS) for material properties. Refer to Section 3.1 for information related to SOPRASEAL® STICK 1100T.
- <u>SOPRASOLIN HD</u> is a 40 mil (1 mm) non-permeable air barrier sheet consisting of SBS modified bitumen self-adhesive with an aluminum foil film facer. Accessory cut rolls measure 4.3, 6.7, 9.8 and 13 in wide x 33 ft. long. Refer to the <u>SOPRASOLIN HD</u> Product Data Sheet (PDS) for material properties. Refer to Section 3.1 for information related to <u>SOPRASOLIN HD</u>.
- ELASTOCOL[™] STICK and ELASTOCOL[™] STICK ZERO: Self-adhesive primers applied to the SOPRASEAL[®] XPRESS G substrates where required to improve adhesion of SOPRASEAL[®] STICK <u>1100T</u> and SOPRASOLIN HD SBS modified bitumen air barrier accessory materials. Refer to <u>Section 1.2</u> for information related to primers.
- <u>SOPRASEAL® STICK FLASHPRO</u> is a 17 mil (0.43 mm) non-permeable flashing accessory sheet consisting of butyl adhesive backing with a HDPE composite facer. Used to seal rough openings, transitions, terminations and penetrations where applicable. Rolls measure 4, 6, 9, 12 and 18 in wide x 33 ft. long. Refer to the <u>SOPRASEAL® STICK FLASHPRO</u> Product Data Sheet (PDS) for material properties.
- <u>SOPRASEAL® SEALANT</u>: Gun-grade, low VOC, solvent-free, polyether adhesive-sealant packaged in 10.1 oz tubes and 20 oz sausages. <u>SOPRASEAL® SEALANT</u> is applied to seal transitions, terminations and penetrations. Refer to the <u>SOPRASEAL® SEALANT</u> Product Data Sheet (PDS) for material properties.
- The contractor and/or applicator is responsible for managing and controlling all exposures related to chemical hazards, toxic substances and odors. This includes personal protective equipment (PPE), administrative and work practice controls, and engineering controls. The contractor is responsible for the elimination or substitution of products as necessary to manage and control exposures related to chemical hazards, toxic substances and odors.

- Refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
- Comply with all project-related health, safety and environmental requirements. Comply with all personal protective equipment (PPE) requirements.
- Review project conditions and determine when and where conditions are appropriate to utilize the specified equipment, materials and methods indicated herein.
- When conditions are determined to be unsafe or undesirable to proceed, take all necessary measures to prevent or eliminate all unsafe and undesirable exposures and conditions.
- Notify the design professional, general contractor and/or other responsible party when project conditions are found to be unacceptable. Ensure corrective action is taken, and conditions are acceptable before installing <u>SOPRASEAL® XPRESS G</u> boards, air barrier materials and related accessories.

Building code approvals and testing:

- Refer to the <u>SOPRASEAL® XPRESS G</u> Product Data Sheet (PDS) for material properties.
- <u>SOPRASEAL® XPRESS G</u> is tested and evaluated in accordance with *the Air Barrier Association of American (ABAA) Process for Approval of Air Barrier Materials, Accessories and Assemblies,* as approved and published on-line by ABAA. Refer to <u>www.airbarrier.org</u>.

Preparation:

- Refer to design documents for framing and substrate requirements prior to installing <u>SOPRASEAL®</u> <u>XPRESS G</u>.
- Prepare substrates as required to install <u>SOPRASEAL® XPRESS G</u> and associated accessory products. Refer to <u>Section 1.1</u> SUBSTRATE EVALUATION, CLEANING, REPAIR AND PREPARATION.

Application:

- Weather conditions:
 - Refer to project specifications for weather-related requirements and limitations for gypsum wall sheathing. Weather conditions and substrates should be dry, free of water, frost and ice.
 - Monitor weather to ensure project conditions remain satisfactory. Protect materials from weather-related damages.
 - Environmental conditions such as sun, cloud cover, wind, humidity, and shade impact the application. Monitor the application and adjust application methods as necessary to accommodate changing weather conditions.
 - Refer to accessory product weather conditions and related limitations.
 - <u>SOPRASEAL® STICK 1100T</u> is available in a winter grade and a summer grade. The application temperature should be between 14° and 50°F (-10° and 10°C) for the winter grade and between 50° and 122°F (10° and 50°C) for the summer grade.
 - Refer to <u>Section 1.2</u> for self-adhesive primer requirements when adhering <u>SOPRASEAL® STICK</u> <u>1100T</u> and <u>SOPRASOLIN HD</u> to the surface of <u>SOPRASEAL® XPRESS G</u>.
- Place <u>SOPRASEAL® XPRESS G</u> boards with the 8 ft. edge installed horizontally. Ensure boards are aligned with framing members to ensure uniform bearing on framing members. The minimum bearing on framing should be $\frac{3}{4}$ in at board ends and joints.
- Cut boards for a secure fit at openings, transitions, terminations and penetrations. Install boards to fit as specified in design documents for exterior gypsum sheathing. <u>SOPRASEAL® XPRESS G</u> board gaps and joints should be less than ¼ in.
- Fasten the <u>SOPRASEAL® XPRESS G</u> boards to steel stud framing using <u>SOPRASEAL® XPRESS G SCREWS</u>. Install screws flush with the <u>SOPRASEAL® XPRESS G</u> surface. Refer to design documents for alternate

fasteners required for other framing types and substrates. Refer to design documents for required fastener spacing to meet project requirements for exterior gypsum sheathing.

- Seal all <u>SOPRASEAL® XPRESS G</u> joints, gaps, transitions, terminations and penetrations using the following method:
 - \circ $\;$ Ensure joints are clean, dry and free of residues and contaminates.
 - Wipe surfaces free of dust using a clean dry cloth.
 - To clean film surfaces, use isopropyl alcohol and a clean cloth. Do not use detergents or cleaning materials that leave a soapy or oily residue.
 - ELASTOCOL[™] STICK and ELASTOCOL[™] STICK ZERO self-adhesive primers are recommended for the <u>SOPRASEAL[®] XPRESS G</u> joints to improve adhesion of <u>SOPRASEAL[®] STICK 1100T</u> and SOPRASOLIN HD. Refer to Section 1.2 for information related to primers.
 - Install <u>SOPRASEAL® STICK 1100T</u> to strip-in and seal joints. Refer to <u>Table 4b</u>. Refer to <u>Figures 4a</u> <u>through 4g</u> to seal and flash non-permeable air barrier details at rough openings, transitions, terminations and penetrations.
 - Apply <u>SOPRASEAL® SEALANT</u> to seal reverse laps and other critical exposures.
- Refer to detail drawings to for guidance to flash and seal joints, gaps, penetrations, transitions and terminations.
- Refer to <u>Table 3.2c</u> for vertical tie-ins between roofing, wall air barrier and foundation waterproofing materials.

Inspection:

- Ensure <u>SOPRASEAL® XPRESS G</u> is properly fastened and secured to meet project design requirements.
- Ensure the air barrier is sufficiently adhered and sealed at all penetrations, termination and transitions.
- Exposure: <u>SOPRASEAL® XPRESS G</u> may be exposed to UV for 90 days. Due to the wide range of environmental conditions and project-related exposures, the effects from weather-related exposures vary from project to project.
- Inspect the air barrier and related materials and repair all deficiencies and damage prior to concealing the air barrier with subsequent building systems, flashings, insulation, wall cladding, etc. Repairs may be made using *application* techniques described above.

Table 4a <u>SOPRASEAL® XPRESS G</u> Warranty Terms				
Form	Warranty Term	Air Barrier	Flashing	
Limited Warranty For Wall Products, Form W115	10 years	SOPRASEAL [®] XPRESS G	SOPRASEAL [®] STICK 1100T	
			SOPRASEAL [®] STICK FLASHPRO	
			SOPRASOLIN HD	

Contact SOPREMA for additional information.

Table 4b <u>SOPRASEAL® XPRESS G</u> Details					
Air Barrier	Detail Name	Flashing Material	Figure		
SOPRASEAL® XPRESS G	Sheathing Joint Treatment	Self Adhesive-Applied	<u>4a</u>		
	Corners	Self Adhesive-Applied	<u>4b</u>		
	Control Joint	Self Adhesive-Applied	<u>4c</u>		
	Fenestration	Self Adhesive-Applied	<u>4d</u>		
	Penetration	Self Adhesive-Applied	<u>4e</u>		
	Wall and Roof Junction	n/a	<u>4f</u>		
	Wall and Foundation Junction	Self Adhesive-Applied	<u>4g</u>		



Figure 4a SOPRASEAL® XPRESS G, Board Joint Treatment With Self-Adhesive Applied Flashing



Figure 4b <u>SOPRASEAL® XPRESS G</u>, Corners With Self-Adhesive Applied Flashing





Figure 4d <u>SOPRASEAL® XPRESS G</u>, Fenestration With Self-Adhesive Applied Flashing



Figure 4e <u>SOPRASEAL® XPRESS G</u>, Penetration With Self-Adhesive Applied Flashing





Figure 4g SOPRASEAL® XPRESS G, Wall and Foundation Junction With Self-Adhesive Applied Flashing

5 MISCELLANEOUS

5.1 WALL AIR BARRIER MATERIALS AND ACCESSORIES

General:

• <u>Table 5.1a</u> provides a general description of SOPRASEAL[®] air barrier materials and accessories. Refer to the Product Data Sheets and Safety Data Sheets for additional product information.

Table 5.1a Air Barrier Materials and Accessories				
Product*	Product description**			
SOPRASEAL [®] LM 204 VP	Liquid-applied air/vapor barrier. Vapor-permeable, one- component, 98% solids, polyether/STPE chemistry, moisture-cured. May be applied down to 25°F (-4°C) without additives. Spray, roller and brush applied. Packaged in 5 gal (19 L) pails and 50 gal (189 L) drums. Blue color.			
SOPRASEAL [®] LM 202 VP	Liquid-applied air barrier. Vapor-permeable, one- component, 74% solids, water-based, non-flammable modified rubber chemistry. Minimum ambient temperature during application is 40°F (4°C) and rising. Spray, roller and brush applied. Packaged in 5 gal (19 L) pails. Red-brown color.			
SOPRASEAL [®] LM 203	Liquid-applied air barrier. Non-permeable, one- component, 74% solids, water-based, non-flammable modified rubber chemistry. Minimum ambient temperature during application is 40°F (4°C) and rising. Spray, roller and brush applied. Packaged in 5 gal (19 L) pails. Grey color.			
SOPRASEAL [®] STICK VP	Vapor-permeable sheet-applied air/vapor barrier consisting of a high-tack adhesive backing and a tri-laminate polypropylene-composite facer. Applied without primer.			
SOPRASEAL [®] STICK 1100T	Non-permeable sheet-applied air/vapor barrier consisting of an SBS modified bitumen self-adhesive backing and a woven polyethylene composite facer. Self-adhesive primer is required.			
SOPRASOLIN HD	Non-permeable sheet-applied air/vapor barrier accessory consisting of an SBS modified bitumen self-adhesive backing and an aluminum facer. Self-adhesive primer is required.			

Product*	Product description**
SOPRASEAL® XPRESS G	Factory-laminated exterior gypsum wall board sheathing. Exterior grade, inorganic faced gypsum board with a factory- laminated non-permeable SBS modified bitumen air barrier factory applied to the exterior surface. The exterior surface consists of a tri-laminate woven polyethylene film.
SOPRASEAL [®] STICK FLASHPRO	Non-permeable flashing accessory sheet consisting of butyl adhesive backing with a HDPE composite facer. Used to seal rough openings, transitions, terminations and penetrations.
<u>SOPRASEAL® LIQUID</u> <u>FLASHING</u>	Gun-grade liquid-flashing. STPE/polyether-chemistry, moisture-cured, packaged in 20 oz sausage packs. Applied to rough openings, joints, transitions, terminations and penetrations to create seamless details. Blue color.
<u>SOPRASEAL® SEALANT</u>	Gun-grade adhesive sealant. STPE/polyether-chemistry, moisture-cured, packaged in 10.1 oz tubes and 20 oz. sausages. Used to seal transitions, terminations and penetrations. Fast setting, fully cured in 24 hours. Light grey color.
SOPRASEAL [®] MESH	Reinforcing mesh fabric for SOPRASEAL® LM 202 VP and SOPRASEAL® LM 203 liquid-applied air barrier penetrations, transitions and terminations. Non-woven polyester fabric. Rolls measure 4, 6 and 9 in wide x 180 ft. long.
SOPRASEAL® XPRESS G SCREWS	Self-drilling #10-24 x 1-1/2 in long, flat Phillips head steel screws with an anti-corrosion coating. For fastening <u>SOPRASEAL® XPRESS G</u> boards to steel stud framing. Packaged in 3,000 screws per container.
ELASTOCOL [™] STICK	ELASTOCOL [™] STICK is fast-drying, solvent-based primer containing 500 g/L VOC's. The primer used with self- adhesive SBS modified bitumen products. The primer may be used on film facer and foil surfaces.
ELASTOCOL [™] STICK ZERO	ELASTOCOL [™] STICK ZERO is fast-drying, solvent-based primer containing 0 g/L VOC's based on EPA regulations and 240 g/L VOC's based on SCAQMD regulations. The primer used with self-adhesive SBS modified bitumen products. The primer may be used on film facer and foil surfaces.
ELASTOCOL [™] STICK H20	ELASTOCOL [™] STICK H2O is a 0 g/L VOC, water-based emulsion primer used with self-adhesive SBS modified bitumen products. Not recommended for use on film surfaces or foil facers.

*Refer to <u>www.SOPREMA.us</u> for product data sheets (PDS) or safety data sheets (SDS).

**Refer to additional preparation and application guidelines, and detail drawings included herein. Contact <u>SOPREMA®</u> at 800.356.3521 for more information.