

TECHNICAL DATA

STRONGSEAL SA

SELF-ADHERING PERFORMANCE ROOFING UNDERLAYMENT

DESCRIPTION:

StrongSeal SA is a self-adhering performance rubber roofing underlayment membrane derived from recycled tire crumb rubber that delivers exceptional waterproofing performance over traditional asphalt based products. StrongSeal SA is a proven roofing underlayment membrane with a record of protecting roofs from moisture intrusion created by ice dams and wind-driven rain. When used on critical roof areas including eaves, valleys, ridges, rakes, dormers and skylights, StrongSeal SA protects the roof deck from water penetration.

StrongSeal SA is a durable 40 mil (1 mm) thick rubber membrane waterproofing material that contains no asphalt. The membrane has a butyl adhesive layer that provides tensile, tack and shear properties as well as high melt strength. It has a polymeric film release liner that protects the adhesive prior to application. During application, the polymeric film release liner is easily removed, allowing the aggressive adhesive layer to grip tightly to the roof substrate. The polymeric film release liner is perforated to allow easy setting of the membrane. In addition, StrongSeal SA can remain exposed for up to one (1) year.

The membrane is supplied in lightweight rolls measuring 3-feet by 67-feet (914mm x 20.4 m) for a total membrane area of 201 square feet (18.7 sq m). The product is significantly lighter than asphalt membranes making it easier to handle and apply.

StrongSeal SA is designed to deliver years of superior weatherproofing protection, as well as ecological relief to our environment. This recycled rubber underlayment provides exceptional resistance to inclement weather. StrongSeal is ideal protecting your structure for years to come. The longevity of StrongSeal makes it ideal for metal, tile and slate roofing.

FEATURES AND BENEFITS:

▶ **Asphalt-Free Performance Rubber Barrier:** The key to StrongSeal SA exceptional barrier performance is the thick rubber membrane that contains no asphalt. The rubber membrane can withstand prolonged exposure and is durable enough to handle heavy foot traffic.

▶ **High Temperature Resistance:** StrongSeal SA can withstand in service temperatures as high as 280°F (137°C) and will not flow or leech at elevated temperatures like typical asphalt membranes.

▶ **Exposure:** StrongSeal SA can remain exposed for up to one (1) year in direct sunlight and inclement weather making it ideal for long dry-in conditions common with new construction, metal, tile, slate and shake roof designs.

▶ **Low Temperature Application:** The membrane remains flexible in cold weather and will roll out without cracking or shatter when fastened.

▶ **Self-Adhering:** The self-adhering membrane will bond firmly to most roof decks and provide watertight seams without applying heat or use of special adhesives.

▶ **Seals Around Fasteners:** StrongSeal SA passes ASTM D1970 nail sealability sealing around typical roof fasteners, like a gasket, resisting leakage and moisture intrusion by water backed up behind ice dams or from wind-driven rain.

▶ **Sustainability:** StrongSeal SA is made from an exceptionally high percentage of recycled material recycling over 600 tires per truckload and is 100% recyclable making it a "green", earth-friendly product. Its high post-consumer recycled content makes it the perfect product to specify for LEED™ projects.

▶ **Perforated Release Liner:** The release liner is perforated along the center to provide easier membrane positioning even in windy conditions.

▶ **Longevity:** The membrane will not crack, dry out or rot; maintaining its integrity for long lasting protection making it ideal for metal, tile and slate roofs.

▶ **Slip Resistant Surface:** StrongSeal SA features a slip resistant surface for safe and easy installation. Its thick rubber membrane promotes traction "like a gym shoe".

▶ **Warranty:** StrongSeal SA is backed by an industry leading 20-year limited material warranty from a publicly held company established in 1927.

ROOF DECK PREPARATION:

StrongSeal SA should only be installed over a clean, dry, continuous sloped structural roof deck. Suitable substrate materials include plywood, OSB (oriented strand board), wood plank, metal, polyisocyanurate insulation, extruded polystyrene insulation, gypsum roof board and concrete. Remove dust, dirt, loose nails, and other debris. Roof deck must be broom swept clean prior to installing membrane.

Roof deck should have a minimum pitch of 2:12 without voids or unsupported areas. Based upon StrongSeal SA passing all of the ASTM D1970 Standard Specifications, the use of StrongSeal SA under a mechanically field seamed metal roof with a minimum pitch of ½:12 is acceptable. StrongSeal SA is not intended as a waterproof membrane on low slope applications.

Remove all protrusions and sharp edges. Pound down all protruding nails. Repair damaged deck areas before installing the membrane. Re-roofing projects require the removal of old roofing materials. Adhesion will be reduced if deck is not clean and dry. Prime OSB (oriented strand board) if membrane does not fully adhere due to coating or texture. Priming is not required for other suitable surfaces provided that they are clean and dry. Consult CETCO for surface preparation when installing to concrete or masonry.

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TYPICAL APPLICATIONS:

- ▶ Critical Roof Areas: eaves, ridges, rakes, valleys, dormers, skylights, penetrations.
- ▶ Installs under all steep slope roof coverings: asphalt shingles, metal, tile, slate, cedar shakes.
- ▶ Ideal for LEED Projects.

MEMBRANE INSTALLATION

Install StrongSeal SA to a properly prepared substrate. The substrate temperature must be at or above 40°F (4°C). The membrane temperature should be minimum 40°F (4°C) for 24 hours prior to application. Apply roof covering material per roof covering manufacturer instructions. Do not apply heat to the product for application in cold weather. Apply membrane directly to roof substrate. Always begin installation at lowest point on the deck and work up the roof so membrane overlap seams shed moisture. Make sure membrane is applied to cover area of highest expected point of ice damming. The membrane must cover at least 2-ft. (600 mm) into living area or the minimum for local building code requirement for ice damming.

Cut the membrane into 10-15 ft. (3-5 m) lengths. Roll out membrane and allow the membrane to relax prior to installation. Place membrane into location for installation. While holding one side of membrane in position, fold over lengthwise to expose the center perforation. Peel back the exposed side of the perforated release liner. From the center to edge, press the membrane in place adhering to the substrate while avoiding air entrapment under the membrane. Repeat for the other half of the membrane. Once membrane is set, roll the membrane to maximize adhesion, starting with the middle and working outward toward the edges.

For successive membrane courses, align and overlap the edge of the previously installed sheet. End laps must be a minimum 6" (150 mm); 12" (300 mm) in high wind areas. Side laps must be a minimum 3" (75 mm); 6" (150 mm) in high wind areas. Repeat membrane installation instructions listed above staggering end laps for successive courses a minimum 36" (915

mm). All laps should be installed to shed moisture. Extend the membrane on the roof deck above the highest expected level of water back up from ice dams and above the highest expected level of snow and ice on the wall sheathing on vertical side walls (dormers) and vertical front walls for ice dam protection. Consider a double layer of membrane in climates where severe ice dams are anticipated. Consult local building codes for requirements.

To install membrane vertically or strapping, all end laps (horizontal laps) must be a minimum of 3" (75 mm); 6" (150 mm) in high wind areas. Side laps (vertical laps) must be a minimum of 6" (150 mm); 12" (300 mm) in high wind areas.

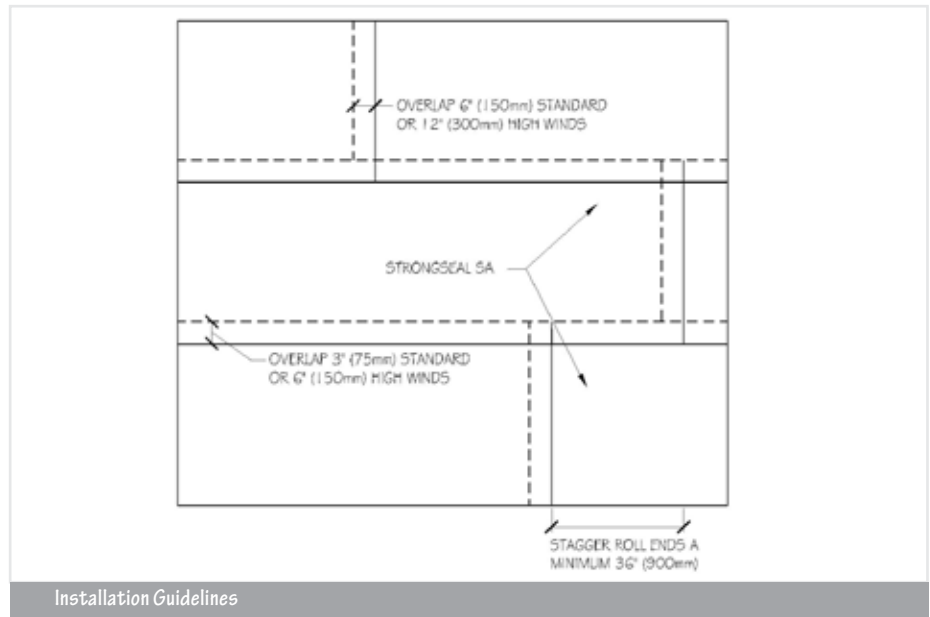
For valley, hip, and ridge applications, start at the lowest point. Apply the membrane in valleys before the membrane is applied to the field. Apply the membrane on the hip and ridge after the membrane is applied to the field. If ridge venting is to be installed, cut out the membrane covering the ridge vent slot. Do not cut down the center and fold into the ridge vent slot.

When folding over the roof edge secure with cap nails installed on a minimum of 18" centers and on every lap. When drip edge or metal flashing is installed, trim StrongSeal SA to edge of roof then install flashing. If not folding over the edge, install drip edge or other metal flashing over end of membrane at time of membrane installation.

On extreme slopes, it is recommended to back nail with button cap nails and cover nails by over lapping with next sheet. If nailing the membrane is required due to conditions such as excessive slope or extreme hot or cold conditions, back-nail along the upper edge on 12" centers (300 mm) using button cap nails.

Full roof deck coverage may be applied with proper attic ventilation to minimize interior condensation. Consistent with good roofing practice, install the membrane such that all laps shed water.

StrongSeal SA membrane can be left exposed during construction as a temporary dry-in barrier for up to one-year.



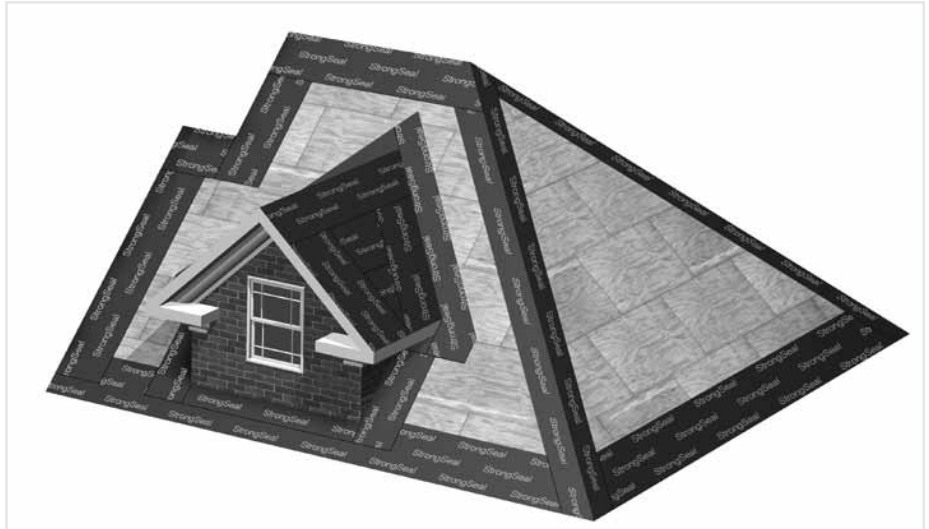
PRECAUTIONS AND LIMITATIONS

- ▶ Membrane can be slippery when wet or covered with frost.
- ▶ Release liner is slippery. Remove liner from work area immediately after membrane application.
- ▶ Always wear fall protection equipment when working on a roof deck and follow good roofing practices.
- ▶ Do not leave permanently exposed to sunlight. Maximum recommended exposure is one-year.
- ▶ Provide proper roof insulation and ventilation to reduce ice dams and minimize condensation.
- ▶ Do not install fasteners through the membrane over unsupported areas of the structural deck or leave holes from removed fasteners.
- ▶ Repair holes, fishmouths, tears or other damage to membrane with a patch of membrane extending past the damaged area 6" (150 mm) on all sides.
- ▶ A primer may be required to adhere to OSB decking and/or at low installation temperatures (less than 40°F).
- ▶ Concrete or masonry substrates may require primer and the laps increased to high wind requirements.

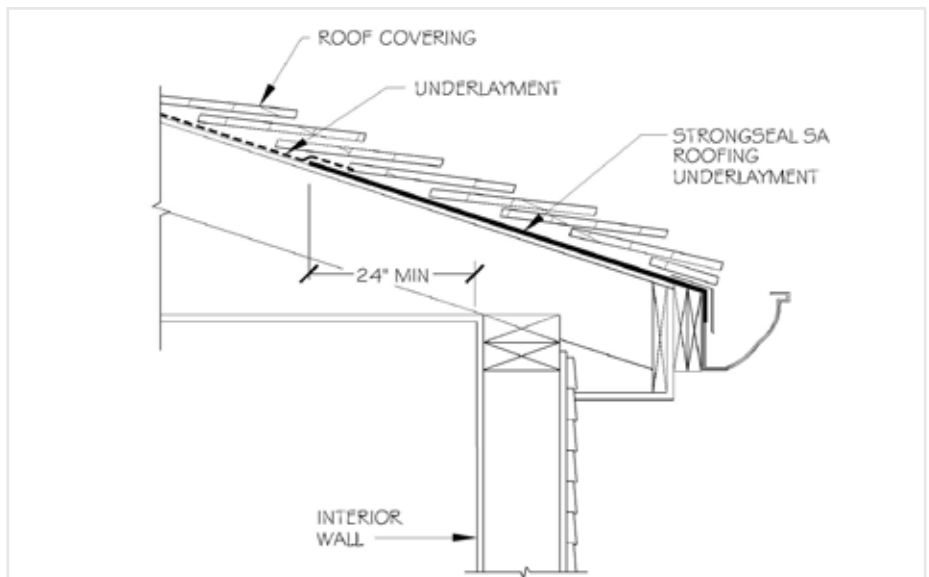
STORAGE

StrongSeal SA roofing underlayment rolls should be stored vertically on end, in a storage facility where the temperature is between 40°F and 100°F (4°C and 38°C). Use a protective covering over pallet while being temporarily stored on site. Keep membrane on pallets when storing to avoid standing in water. Membrane must be kept at a minimum 40°F (4°C) for 24 hours prior to use.

Do not double stack pallets.



Critical Area Application



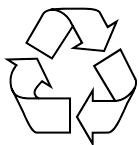
Ice Barrier Installation

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PRODUCT DATA	
PROPERTY	TYPICAL VALUE
Roll Length	67 feet (20.4 M)
Roll Width	36" (914 mm)
Roll Size	201 sq-ft (18.7 M ²)
Rolls/Pallet	20
Maximum Service Temp	280°F (137°C)

PERFORMANCE PROPERTIES		
PROPERTY	TEST METHOD	TYPICAL VALUE
Membrane Thickness	ASTM D5147	40 mils (1.02 mm)
Minimum Load (Tensile)	ASTM D2523	>40 lbF/in
Elongation at Break	ASTM D2523	>58%
Adhesion to Plywood, 40°F	ASTM D903	5.6 lbF/ft
Adhesion to Plywood, 75°F	ASTM D903	26 lbF/ft
Thermal Stability, max	ASTM D1204	<0.1"
Flexibility Temperature	ASTM D1970	<-20°F
Tear Resistance	ASTM D4073	>75 lbF
Permeance, max	ASTM E93-E	0.05 Perms
Sealability Around Nail	ASTM D1970	Pass
Waterproof Integrity After Low Temp Flexibility	ASTM D1970	Pass
Waterproof Integrity of Seam	ASTM D1970	Pass
Slip Resistance	Greater than Felt	Pass
StrongSeal SA meets or exceeds ASTM D1970 Standard Specifications		



Made from post-consumer recycled materials

SEPTEMBER 2010

IMPORTANT: The information contained herein supersedes all previous printed versions, and is believed to be accurate and reliable. For the most up-to-date information, please visit www.CETCO.com. CETCO accepts no responsibility for the results obtained throughout application of this product. CETCO reserves the right to update information without notice.



www.CETCO.com

2870 Forbs Avenue Hoffman Estates, IL 60192
847.851.1800 | 800.527.9948