



SA-APP KoolCap FR

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PRODUCT DESCRIPTION

SA-APP KoolCap® FR membrane is a highly reflective, self-adhered APP modified bitumen roofing membrane with fire retardant additives manufactured using **Adeso®** dual-compound technology, whereby the membrane consists of an APP (atactic polypropylene) modified asphalt compound on top and a pressure sensitive adhesive compound on the bottom. SA-APP KoolCap FR features CURE Technology®, an innovative thin film technology attributing to exceptional granule retention, stain and discoloration resistance and UV stabilization for long-term durability and performance. CURE is solvent-free and environmentally friendly. SA-APP KoolCap FR has a highly reflective granule surface which meets or exceeds most standards for “Cool Roofing” and has a SRI of 96.



Constructed with premium APP resins and incorporating superior polyester reinforcing, SA-APP KoolCap FR provides an exceptionally durable roofing product with exceptional tensile strength and dimensional stability. SA-APP KoolCap FR features **SEALLap®** ULTRA side lap with self-adhesive compound for an instant bond, tested stronger than all other application methods and **FASTLap®**, granule free end lap. Each of these patented features provide for greater ease of application as well as improved long-term performance. SA-APP KoolCap FR is also used as a flashing membrane in all applicable specifications. Meets ASTM D6222 Type 1 requirements.

BASIC USES

SA-APP KoolCap FR membrane is designed for applications where the use of hot asphalt, cold process adhesive or a propane torch is undesirable. Applications include new roofing, recover (retrofit) and BUR repairs. This system must be installed over an acceptable base sheet, roof insulation, or other suitable substrate. See the Mule-Hide Self-Adhered Modified Bitumen Application Guidelines for complete specifications and details.

SPECIFICATIONS AND PACKAGING

Thickness	Approx. Weight	Roll Size	Rolls/Pallet	Coverage
4.0 mm (160)mils	90 lb./roll	32'10"x39 3/8" (10mx1m)	20	100 ft ²

Physical Property	Test Method	ASTM Values
Peak Load at 73°F (23°C)	ASTM D5147	50 lbf/in. (8.8) kN/m
Elongation at 73°F (23°C)	ASTM D5147	23%
Tear Strength at 73°F (23°C)	ASTM D5147	70 lbf (311) N
Low Temperature Flexibility, max, F° (C°)	ASTM D5147	32°F (0°C)
Granule Embedment (maximum loss)	ASTM D5147	2g
Adhesion to Plywood @ 40°F (4.4°C)	ASTM D1970	2.0 lbf/ft
Adhesion to Plywood @ 75°F (24°C)	ASTM D1970	12.0 lbf/ft
Sealability around Nail	ASTM D1970	Pass
Waterproof integrity after low temp flexibility	ASTM D1970	Pass
Waterproof integrity of lap seam	ASTM D1970	Pass

Colors Available: Highly Reflective White

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification or specification range for any particular property of this product.

PRODUCT BENEFITS

1. Suitable for most “Cool Roof” specifications; meets requirements of CA Title 24
2. Enhanced puncture and tear resistance
3. Scorch resistance surface

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4. Exceptional granule retention
5. *FASTLAP* granule free end lap provides faster, stronger seams.
6. *SEALLap* Ultra granule free selvage edge now with self-adhesive compound for an immediate, long-term monolithic seam.

CODE APPROVALS

Various code approvals are available including: Factory Mutual, Underwriters Laboratories, Miami-Dade, Florida Product Approval, ICC-ESR and Texas Department of Insurance. Contact Mule-Hide Technical Department for specific ratings.

APPLICATION GUIDELINES

Apply SA-APP KoolCap FR only in dry weather and when air and surface temperatures are 40°F (5°C) and rising.

- Apply over clean, dry, dust and debris-free substrates. Ensure that all abandoned roof projections are properly closed off.
- Mule-Hide 121 Asphalt Primer or High-Tack Primer (water based) may be used where a primer is required. Contact Mule-Hide for appropriate uses and further information.
- All substrates shall be designed with proper expansion devices.
- Wood decks shall have all joints cross blocked and/or properly supported.
- Verify the fire rating of the roofing assembly over any combustible substrate.
- Installation of SA-APP KoolCap FR should not adversely affect the ventilation of existing construction.
- Do not apply directly to existing shingles, shakes or other unacceptable roof coverings.

INSTALLATION INSTRUCTIONS

SA-APP KoolCap FR is intended to be used as a cap sheet or top layer in new or re-roofing applications, and is required to complete the roofing system. SA-APP KoolCap FR may also be applied directly to non-combustible substrates.

1. Nail Base or an approved insulation shall be mechanically attached to a suitable substrate. SA-APP KoolCap FR may be adhered directly to a suitable substrate.
2. Starting at the low point of the roof, unroll the SA-APP KoolCap FR and allow it to relax.
3. After positioning the sheet, fold the top half of the sheet back lengthwise, remove the release liner and roll the material back into place, taking care to avoid wrinkles and trapped air, and maintaining proper sheet alignment.
4. Firmly hand press sheet from the center out avoiding wrinkles and trapped air as the SA-APP KoolCap FR adheres to the approved substrate.
5. When completing end laps stagger end laps approximately three feet apart. Cut the top corner of the top sheet on a 45-degree angle (start the cut 3" in from the top edge and finish down 3" from the top edge) and the bottom corner of the bottom sheet on a 45-degree angle (start the cut 3" in from the bottom edge and finish 3" up from the bottom edge). Apply a solid bead of Mod Bit Sealant along both cut edges. Remember to remove the release film from the *FASTLap* and *SEALLap* edges prior to adhering the lower half of the SA-APP KoolCap FR.
6. Repeat procedure to adhere remaining half of the sheet.
7. After the sheet is adhered, it is required to be rolled with a minimum 75 lb. roller. Roll across the 3' width first, then the length of the roll can be rolled.
8. Position subsequent sheets to overlap the previous courses by the width of the selvage edge (overlap in a shingle fashion ensuring that laps are water shedding).

This is only a brief summary and NOT the complete specification. The Mule-Hide Self-Adhered Modified Bitumen Application Guidelines, Specifications, Details, Technical Bulletins, and associated documents should be thoroughly reviewed prior to starting any project.

REFLECTIVITY AND OTHER CHARACTERISTICS

An ENERGY STAR qualified low slope roof product must have an initial solar reflectance of at least 0.65 and a 3-year aged solar reflectance of at least 0.50. Cleaning the aged roof surface is not permitted by the ENERGY

Product Data Sheet

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STAR test protocol. Energy Star is only valid in the United States for Roofing Products.

The Cool Roof Rating Council (CRRC) does not specify minimums for reflectance or emittance but they do require specific protocols for testing and reporting. Cleaning of the aged roof surface is not permitted for determination of radiative properties after 3 years.

Reflectivity characteristic*	Initial	3-Year
CRRC Solar Reflectance	0.77	0.68
CRRC Thermal Emittance	0.90	0.83
CRRC SRI (Solar Reflectance Index)	96	83

*Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary. Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures. CRRC Product ID is 0670-0023 for this product.

A LEED "point" may be earned if a roof material is ENERGY STAR qualified and has a thermal emittance of at least 0.90 as determined by ASTM E408.

Solar Reflectance Index (SRI) is calculated per ASTM E1980. The SRI is a measure of the roof's ability to reject solar heat, as shown by a small temperature rise. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. Materials with the highest SRI values are the coolest choices for roofing. Due to the way SRI is defined, particularly hot materials can even take slightly negative values, and particularly cool materials can even exceed 100.

California Title 24 requires an initial minimum reflectance of 0.70 and emittance of 0.75 as determined by CRRC.

PROTECTION & SAFETY

Mule-Hide maintains Safety Data Sheets on all of its non-exempt products. Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. Mule-Hide's Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Mule-Hide products in your facilities.

ADDITIONAL INFORMATION

The information given on this PDS is subject to change without notice. Always check the Mule-Hide website at www.mulehide.com for the latest information, changes and updates or contact Mule-Hide Products Company at 800-786-1492.

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