



Product Data Sheet

MULE-HIDE SA-APP KOOLCAP® G FR

PRODUCT DESCRIPTION

Mule-Hide's SA-APP KoolCap® G FR membrane is a highly reflective, self-adhered APP modified bitumen roofing membrane specially manufactured whereby the membrane consists of an APP (atactic polypropylene) modified asphalt compound on top and a pressure sensitive adhesive compound on the bottom. Featuring a patent pending process, SA-APP KoolCap G 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 G provides an exceptionally durable roofing product with exceptional tensile strength and dimensional stability. Mule-Hide SA-APP KoolCap G FR features an innovative thin film technology resulting in exceptional granule retention, stain and discoloration resistance and UV stabilization for long term durability and performance. SA-APP KoolCap G is solvent-free and environmentally friendly. Meets ASTM D 6222 Type 1 requirements.

BASIC USES

SA-APP KoolCap G FR membranes are specially 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. Do not apply to shingles, shakes or other residential roofing material. See the Mule-Hide Self-Adhered Modified Bitumen Application Guidelines for complete specifications and details.

TYPICAL PHYSICAL PROPERTIES

PRODUCT NAME	THICKNESS mm (mils)	APPROX WEIGHT lb/roll	ROLL SIZE	ROLLS/PALLET	COVERAGE
SA-APP KoolCap G FR	4.0 (160)	90 lb	32'10"x3'3-3/8" (10mx1m)	20	(approx) 100 ft ²

TEST METHOD	TECHNICAL DESCRIPTION	VALUES
ASTM D5147	Peak load at 73.4 ± 3.6°F (23 ± 2°C), MD & XMD, min, lbf/in. (kN/m)	50 (8.8)
ASTM D5147	Elongation at 73.4 ± 3.6°F (23 ± 2°C), MD & XMD, min, %	23%
ASTM D5147	Tear strength at 73.4 ± 3.6°F (23 ± 2°C), min, lbf (N)	70 (311)
ASTM D5147	Low temperature flexibility, max, °F (°C)	32°F (0°C)
ASTM D5147	Granule Embedment, max, g	2
ASTM D1970	Adhesion to Plywood @ 40°F (4.4°C), min lbf / ft width	2.0
ASTM D1970	Adhesion to Plywood @ 75°F (24°C), min lbf / ft width	12.0
ASTM D1970	Sealability around nail	Pass
ASTM D1970	Waterproof integrity after low temp flexibility	Pass
ASTM D1970	Waterproof integrity of lap seam	Pass

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.

BENEFITS & SUPPLEMENTAL STATEMENTS

- Suitable for most "Cool Roof" specifications; meets requirements of CA Title 24
- Enhanced puncture and tear resistance
- Scorch resistance surface
- Exceptional granule retention



Product Data Sheet

MULE-HIDE SA-APP KOOLCAP™ G FR

CODE APPROVALS/COMPLIANCE

A variety of Factory Mutual Ratings, Underwriters Laboratories Classifications, Texas Department of Insurance and Florida Product Approvals are available. Contact the Mule-Hide Technical Service Department for additional information.

INSTALLATION INSTRUCTIONS

SA-APP KoolCap G FR is intended to be used as the primary weathering surface in new or re-roofing applications and is to be applied as the outermost layer of a multi-ply roofing system over a compatible Mule-Hide base sheet or inner ply sheet. SA-APP KoolCap G FR may also be applied directly to non-combustible substrates.

- Apply over clean, dry, dust and debris free substrates.
- Concrete decks must first be primed with Mule-Hide 121 asphalt primer
- When re-roofing, remove all existing roofing materials down to a clean, dry substrate. Ensure that all abandoned roof projections are properly closed off.
- Concrete and steel roof decks are to be designed with proper expansion joints.
- Wood decks should have all joints blocked and properly supported.
- Verify the fire rating of the roofing assembly over any combustible substrate.
- Ensure that the installation of SA-APP KoolCap G FR does not prevent the ventilation of the existing construction.
- Do not apply over shingles or any granulated surface.
- When installing SA-APP KoolCap G FR
 - Start at the low point of the roof.
 - Unroll the material and allow to relax in the sun for at least 15 minutes.
 - Install with traditional torch roofing techniques ensuring proper heating of the roofing material as not to expose or compromise the reinforcement.
 - Do not heat the substrate.
 - Position successive rolls providing a minimum 6" end lap and 3" side lap. Asphalt bleed out shall be 1/4" to 3/8" on all seams.
 - Laps shall be rolled with a 6" wide roller immediately after heat-welding.
- Details and flashings may be installed using SA-APP KoolCap G FR with torch applied techniques. Do not use cold adhesives or hot asphalt. Check project details for proper installation requirements.
- Due to the unique finish of the SA-APP KoolCap G FR, special care must be taken when heat fusing side and end laps. To maintain the appearance of the specialized finish, it is recommended that a cardboard core or similar item be placed to support the product so as to prevent the membrane from folding over onto itself. When seaming to the specialized finished surface of SA-APP KoolCap G FR, warm the surface of the underlying sheet first, then heat the backside of the upper sheet to a semi-solid condition and mate the two surfaces. While still warm, apply light pressure with a silicone hand roller to ensure that sheets are properly fused together.

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

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.



Product Data Sheet

MULE-HIDE SA-APP KOOLCAP® G FR

SUPPLEMENTAL APPROVALS, STATEMENTS AND CHARACTERISTICS

1. Mule-Hide SA-APP KoolCap G FR meets ASTM D 6222 Type 1 requirements.

DESCRIPTION	Initial	Rapid Ratings*	Weathered
CRRC Solar Reflectance	0.77	0.72	Pending
CRRC Thermal Emittance	0.90	0.90	Pending
CRRC SRI (Solar Reflectance Index)	96	89	Pending
CRRC Product ID 0670-0023			
*CRRC Rapid Ratings: These are interim laboratory-aged values that simulate weathered values. These values will be replaced with the measured three-year aged values upon completion of the weathering process. 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.			

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 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.

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 E 1980. 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.

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.

DISCLAIMER

The statements provided concerning the material shown are intended as a guide for material usage and are believed to be true and accurate at the time of printing. No statement made by anyone may supersede this information, except when done in writing by Mule-Hide Products Co., Inc. Since the manner of use is beyond our control, Mule-Hide does not authorize anyone to make any warranty of merchantability or fitness for any particular purpose or any other warranty, guarantee or representation, expressed or implied, concerning this material. This product may be eligible for a Mule-Hide warranty, please check the Mule-Hide website at www.mulehide.com or contact Mule-Hide directly at 800-786-1492 for details. Buyer and user accept the product under these conditions and assume the risk of any failure, any injury person or property (including that of the user), loss or liability resulting from the handling, storage or use of the product whether or not it is handled, stored or used in accordance with the directions or specifications. Mule-Hide must be notified in writing of any claims and be given the opportunity to inspect the alleged failure before repairs are made.