



APP Torch G KoolCap FR

Revision Date: Jan 2021

PRODUCT DESCRIPTION

APP Torch G KoolCap® FR membrane is a premium, highly reflective, polyester reinforced APP modified bitumen roofing membrane with fire retardant additives, manufactured for torch applications, and a burn off bottom layer film. APP Torch G 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 a non-woven polyester reinforcement, APP Torch G KoolCap FR provides an exceptionally durable roofing product with exceptional flexibility and dimensional stability. Mule-Hide APP Torch G 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. APP Torch G KoolCap FR also features FASTLap® technology for granule-free end laps. The membrane is solvent-free and environmentally friendly. Meets ASTM D6222 Type 1, Grade G requirements.

BASIC USES

APP Torch G KoolCap FR membrane is designed for heat-welded (torch) applications including new roofing, recover (retrofit) and BUR repairs. The system must be installed over an acceptable substrate or as part of a multi-ply system. It is not intended to be installed directly to a combustible substrate. See the Mule-Hide APP Modified Bitumen Application Guidelines for complete specifications and details.

SPECIFICATIONS AND PACKAGING

Thickness	Approx. Weight	Roll Size	Rolls/Pallet	Coverage
4.2 mm (165)mils	117 lb./roll	32'10"x39 3/8" (10mx1m)	20	100 ft ²

Physical Property	Test Method	ASTM Values	Typical Performance
Bottom side coating thickness	ASTM D5147	30 mils (1.4mm)	55 mils [1.4 mm]
Peak Load at 73°F (23°C)	ASTM D5147	≥ 50 lbf/in. (8.8) kN/m	99 lbf/in [21 kN/m] MD 69 lbf/in [15 kN/m] XMD
Elongation at Peak Load at 73°F (23°C)	ASTM D5147	≥ 23%	43% MD 45% XMD
Ultimate Elongation at 73°F (23°C)	ASTM D5147	≥ 30%	47% MD 48% XMD
Tear Strength at 73°F (23°C)	ASTM D5147	≥ 70 lbf (311) N	143 lbf/in [626 N] MD 101 lbf/in [529 N] XMD
Low Temperature Flexibility, max	ASTM D5147	≤ 32°F (0°C)	18°F [-8°C]
Compound Stability, min	ASTM D5147	≥ 230°F (110°C)	302°F [150°C]
Granule Embedment (maximum loss)	ASTM D5147	2g	0.09 g

Color 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

- Suitable for most “Cool Roof” specifications; meets requirements of CA Title 24
- Demonstrated to maintain exceptional reflectivity over time
- Premium membrane construction for superior durability and puncture resistance
- Resistance to discoloration and scuffing
- Exceptional granule retention; 0.09 g loss vs. ASTM max 2.0 g

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- FASTLap granule free end lap provides faster, stronger seams.
- Granule free selvage edge

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 one or more layers over a clean, dry, dust and debris free acceptable substrate.
- 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 APP Torch G KoolCap FR does not prevent the ventilation of the existing construction.
- Do not apply over shingles or any granulated surface.

INSTALLATION INSTRUCTIONS

APP Torch G KoolCap 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. APP Torch G KoolCap FR may also be applied directly to non-combustible substrates.

When installing APP Torch G KoolCap FR

1. Start at the low point of the roof.
2. Unroll the material and allow to relax in the sun for at least 15 minutes.
3. Install with traditional torch roofing techniques ensuring proper heating of the roofing material as not to expose or compromise the reinforcement.
4. Do not heat the substrate. Do not overheat the material to expose or compromise the reinforcement.
5. 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.
6. Due to the unique finish of the APP Torch G KoolCap 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 APP Torch G KoolCap 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.
7. Laps shall be rolled with a 6" wide roller immediately after heat-welding.

Details and flashings may be installed using APP Torch G KoolCap FR with torch applied techniques. Do not use cold adhesives or hot asphalt. Check Mule-Hide published details for proper installation requirements.

This is only a brief summary and NOT the complete specification. The Mule-Hide APP 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	0.88
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.

DISCLAIMER

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