Code Compliance Research Report
CCRR-1078

Issue Date: 12-22-2016
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Renewal Date: 02-28-2025

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 53 23 – Ethylene-Propylene-Diene-Monomer Roofing

REPORT HOLDER:
Mule-Hide Products Co., Inc.
1195 Prince Hall Drive
Beloit, WI 53511
800-786-1492
www.mulehide.com

REPORT SUBJECT:
Mule-Hide Roof System

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:
- 2021, 2018, 2015 *International Building Code®* (IBC)
- 2021, 2018, 2015 *International Residential Code®* (IRC)
- 2023, 2020 *Florida Building Code* (FBC) (excluding High-velocity Hurricane Zones) (see Section 9)

1.2 The Mule-Hide Roof System with FR Adhesive has been evaluated for the following properties (see Table 1):
- Fire Classification
- Wind Uplift Resistance

1.3 The Mule-Hide roof system with FR Adhesive has been evaluated for the following uses:
- Fire classified roofing assemblies

2.0 STATEMENT OF COMPLIANCE

The Mule-Hide Roof System with FR Adhesive complies with the Codes listed in Section 1.1, for the properties stated in Section 1.2, and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in section 6.0.

3.0 DESCRIPTION

3.1 FR Adhesive:

The FR Adhesive contains fire retardants and is an acrylic water-based bonding adhesive for adhering EPDM membrane directly to OSB or plywood substrate roof systems. The adhesive is supplied in 5-gallon, 55-gallon, and 330-gallon totes with a 1 year shelf life.

3.2 EPDM Roofing Membranes:

The EPDM membrane must be Mule-Hide EPDM, either 0.045 inch or 0.060 inch thick, recognized in ICC-ES ESR-1463.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Fire Classification: The fire classification of the roof system is Class C.

4.2 Wind Uplift Resistance: The allowable uplift resistance for the roof system is 120 psf, which reflects the ultimate pressure divided by the safety factor of 2.0.

5.0 INSTALLATION

5.1 General:

The Mule-Hide Roof System with FR Adhesive must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

5.2 Application:

FR Adhesive is used for adhering EPDM membrane directly to OSB or plywood substrate roof systems. The roof system must be installed at a minimum slope of 1/4:12 and

a maximum slope of 1:12. The roof deck must be minimum 7/16-inch thick OSB or minimum 1/2-inch-thick plywood. The OSB must comply with US DOC PS 2 and the plywood must comply with US DOC PS 1 or PS 2. The EPDM membrane must be immediately rolled onto the wet adhesive. The adhesive must be applied at a coverage rate of 100 to 120 square feet per gallon.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 The EPDM membrane must be Mule-Hide EPDM recognized in ICC-ES ESR-1463.

6.3 The roof deck to which the Mule-Hide Roof System is applied must be designed for the applicable wind loads.

6.4 The FR Adhesive is manufactured in Memphis, Tennessee under a quality program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E108 and UL 1897.

7.2 Documentation of an Intertek approved quality control system for the manufacturing of products recognized in this report.

8.0 IDENTIFICATION

The FR Adhesive is identified with the Mule-Hide Products Co., Inc. name, address, and telephone number, the product name (FR Adhesive), batch number, the Intertek Mark, and the Code Compliance Research Report number (CCRR-1078).

9.0 FLORIDA BUILDING CODE

The Mule-Hide Roof System with FR Adhesive, described in Sections 2.0 through 7.0 of this Research Report, complies with the 2023 and 2020 *Florida Building Code – Building*, subject to the following condition:

- Use of the Mule-Hide Roof System with FR Adhesive for compliance with the High-Velocity Hurricane Zone provisions of the 2023 and 2020 *Florida Building Code – Building* is outside the scope of this Research Report.

Intertek is an approved evaluation entity and quality assurance entity pursuant to Florida Statute 553.842 – *Product Evaluation and Approval*

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the Intertek website address: https://bpdirectory.intertek.com is recommended to ascertain the current version and status of this report.

TABLE 1 – PROPERTIES EVALUATED

PROPERTY	2021 IBC SECTION	2023 FBC – BUILDING SECTION	2021 IRC SECTION	2023 FBC – RESIDENTIAL SECTION	STANDARD
Wind Uplift Resistance	1504.4.1	1504.3.1	R905.1	R905.1	UL 1897
Fire Classification	1505.1	1505.1	R902.1	R902.1	ASTM E108