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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION

FIRE TECHNOLOGY DEPARTMENT
WWW.FIRE.SWRI.ORG
FAX (210) 522-3377

FIRE PERFORMANCE EVALUATION IN GENERAL ACCORDANCE WITH ASTM E108, *STANDARD TEST METHODS FOR FIRE TESTS OF ROOF COVERINGS,* CLASS A SPREAD OF FLAME TESTING

Material ID: *47 oz.*

FINAL REPORT
Consisting of 6 Pages

SwRI® Project No.: 01.22387.17.129c
Test Date: October 19, 2017
Report Date: November 3, 2017

Prepared for:

Go Green
294 Hennon Way
Dalton, GA 30720

Prepared By:

Natasha Albracht
Engineer
Material Flammability Section

Approved By:

Matthew S. Blais, Ph.D.
Director
Fire Technology Department

1.0 INTRODUCTION

This report describes a fire performance evaluation conducted for Go Green in general accordance with ASTM E108-17, Standard Test Methods for Fire Tests of Roof Coverings, Class A Spread of Flame (SOF) test requirements. Testing was conducted in general accordance because only one sample was tested instead of two, which is required by the standard. Testing was conducted at the Fire Technology Department of Southwest Research Institute (SwRI), located in San Antonio, Texas.

This test method should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all the factors that are pertinent to an assessment of the fire hazard of a particular end use.

This report describes the testing of the assembly tested and the results obtained. The results presented in this report apply specifically to the material tested, in the manner tested, and not to the entire production of these or similar materials, nor to the performance when used in combination with other materials.

2.0 SAMPLE DESCRIPTION

SwRI received the test sample on October 12, 2017, and SwRI personnel constructed the non-combustible test deck at a later date. A description of the sample is below in Table 1.

Table 1. Sample Description.

Material ID	Description	Color
47 oz.	47 oz. turf	Green

3.0 TEST SETUP AND CRITERIA

Class A tests are applicable to roof coverings that are effective against severe test exposure, afford a high degree of fire protection to the roof deck, do not slip from position, and do not present a flying brand hazard. When a roof covering is restricted for use on noncombustible decks (steel, concrete or gypsum) only the spread of flame test is required. To be regarded as Class A, a roofing system shall meet the requirements of two spread of flame tests. The 3 ft-4 in. × 8 ft test deck was inclined at a slope of 1:12 and was exposed to a 1400°F ± 50°F flame for 10 min. The test was performed in the presence of a 1056 ± 44-ft/min air velocity.

In order to meet acceptance criteria in accordance with ASTM E108, a roof covering material shall meet the following conditions when subjected to the particular class of fire tests:

1. At no time, during or after, the Class A spread of flame test:

- Any portion of the roof covering material be blown or fall off the test deck in the form of flaming or glowing brands that continue to glow after reaching the floor,
- The roof deck be exposed (except for roof coverings restricted to use over noncombustible deck), or
- Portions of the roof deck fall away in the form of particles that continue to glow after reaching the floor.

2. During the Class A spread of flame tests, the flaming shall not spread beyond 6 ft (1.8 m) and there shall be no significant lateral spread of flame from the path directly exposed to the test flame.

4.0 RESULTS

The material identified as *47 oz.* **passed** the Class A SoF tests according to the requirements of ASTM E108-17. Visual observations are presented below and photographic documentation can be found in Appendix A.

Ambient air temperature: 86°F
Ambient relative humidity: 54%

Time (min:s)	Observations
0:00	Start of test; burner on.
1:45	Leading edge material starting to roll back.
10:00	Burner off. Flames start to reced.

Flame-Spread Distance and Time.

Distance	1 ft	2 ft	3 ft	4 ft	5 ft	6 ft	7 ft	8 ft
Time (min:s)	9:46	—	—	—	—	—	—	—

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

(CONSISTING OF 2 PAGES)

Figure A-1. SoF Test setup.

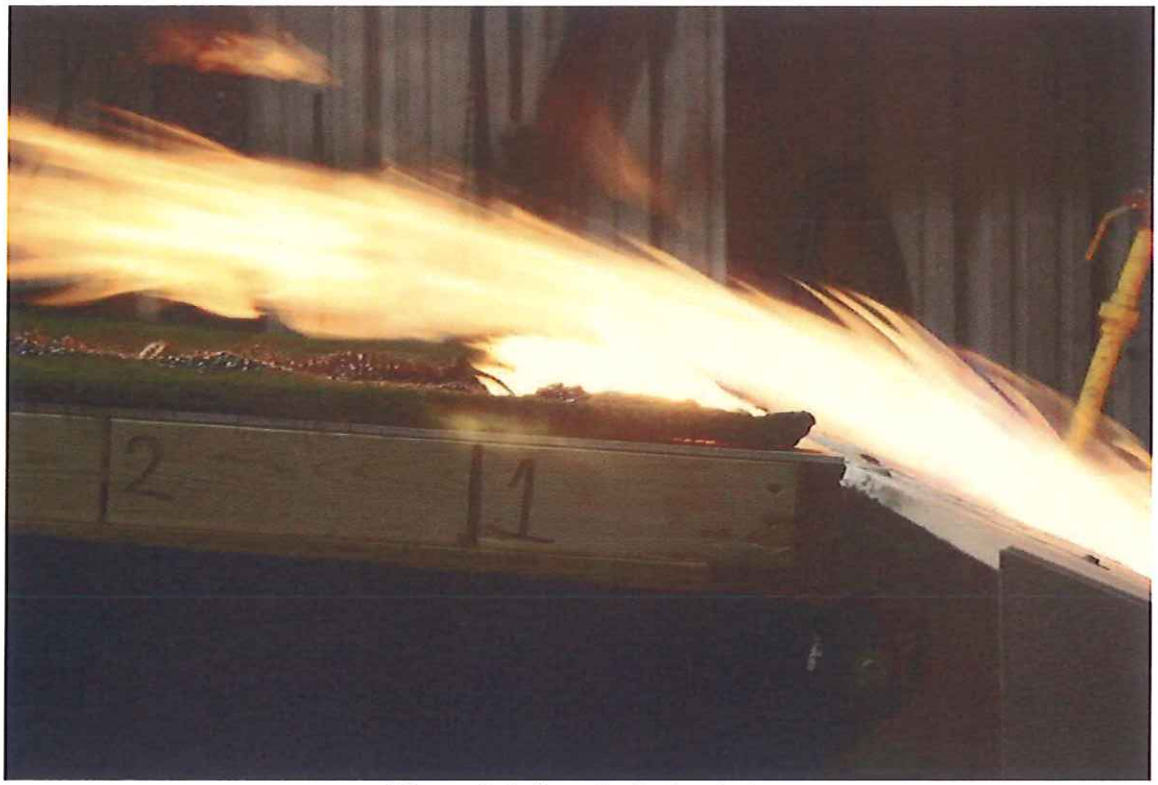

Figure A-2. Sample during test.

Figure A-3. Sample at the end of the flame exposure.