



TUFFWRAP INSTALLATIONS, INC.

2080 Detwiler Road
Harleysville, PA 19438
(800) 995-4556

www.tuffwrap.com/smartseam

SMARTSEAM®

CSI Section:

09 54 00 Specialty Ceilings

1.0 RECOGNITION

Tuffwrap Installations, Inc’s SmartSeam® barrier recognized in this report has been evaluated for use as an interior temporary ceiling construction barrier. The interior finish classification, strength, egress, flame propagations and fire safety properties of the SmartSeam® barrier comply with the intent of the provisions of the following codes and regulations:

- 2018, 2015, and 2012 International Building Code® (IBC)
- 2018, 2015, 2012 International Residential Code® (IRC)
- 2018, 2015, and 2012 International Fire Code® (IFC)

2.0 LIMITATIONS

Use of the SmartSeam® barrier recognized in this report is subject to the following limitations:

- 2.1 The SmartSeam® temporary barriers are for temporary purposes only and shall be for use in structures for a period of less than 180 days as defined by Section 3103.1 of the IBC, unless otherwise approved by the building official.
- 2.2 The use of the SmartSeam® temporary barrier as part of a fire-resistance-rated assembly has not been evaluated.
- 2.3 The SmartSeam® temporary barrier has been evaluated for interior use only.
- 2.4 The SmartSeam® temporary barrier has not been evaluated to carry imposed loads and is not intended for structural use.
- 2.5 The SmartSeam® temporary barrier shall be installed in accordance with the applicable code, the manufacturer’s published installation instructions, and this report. Where there is a conflict, the most restrictive requirements shall govern.

2.6 The evaluation of light and ventilation code requirements is outside the scope of this criteria.

2.7 The SmartSeam® temporary barrier recognized in this report is produced in Harleysville, PA.

3.0 PRODUCT USE

3.1 General: The SmartSeam® barrier has been evaluated for use as temporary physical barrier installed below automatic sprinklers to mitigate dust and debris when separating an area below the barrier from a construction-zone located above the barrier.

3.2 Strength Performance: The SmartSeam® barrier, when installed in accordance with Section 3.7 of this report and tested for uniform pressure, reached a maximum ultimate load of 23 psf (1.101 kPa), meeting the minimum design pressure of 5 psf (0.239 kPa) in accordance with ASCE 7 Table 4.3.1 for membrane structures.

3.3 Surface Burning and Smoke Development: The SmartSeam® barrier has a Class A rating in accordance with Section 803.1.2 of the 2018 IBC and Section 803.1.1 of the 2015 and 2012 IBC. The barrier has a flame spread index and smoke-developed index that conforms to Section 302.9 of the IRC when tested in accordance with ASTM E84.

3.4 Flame Propagation of Textiles and Films: The SmartSeam® barrier when tested, meets the criteria in accordance with NFPA 701 Test Method 1 as required in Section 3104 of the IFC and Section 3102 of the IBC.

3.5 Melt-out or Drop-out under Automatic Sprinklers: The SmartSeam® barrier, when tested in accordance with FM 4651 and installed no greater than 2 feet (700 mm) horizontally from the sprinkler head location, meets the criteria of melt-out and drop-out behavior before sprinkler operation. SmartSeam® drops out prior to one minute and forty-five seconds of exposure to the fire with no spreading flame. Melt-out or drop-out behavior when sprinklers are in operation was found not to be applicable to the SmartSeam® barrier when tested to FM 4651. The seams of the barrier are not watertight and allow water to reach the fire source, causing the intensity of the fire source in the test specimen to be diminished, which results in exposure fire never to reach the intended temperature to result in melt-out or drop-out.

3.6 Drop-out Ceiling Assemblies: The SmartSeam® barrier meets the requirements of UL 723S for use beneath sprinklers when installed at 12⁷/₈ inches (327 mm) below the sprinkler head location.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.

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3.7 Stability of Interior Finish Material: The SmartSeam® barrier meets the stability requirements of Section 803.14 of the 2018 IBC, Section 803.12 of the 2015 IBC, and Section 803.10 of the 2012 IBC, when subject to room temperatures of 200°F (93° C) for not less than 30 minutes and installed in accordance with this report.

3.8 Installation: The manufacturer's published installation instructions and this report shall be strictly adhered to. All installations shall be by TuffWrap Installation, Inc.'s trained personnel. Attachment of SmartSeam® to the supporting structure is outside the scope of this report and design documents shall be submitted for approval when deemed required by the building official.

3.8.1 Installation of SmartSeam® in Relation to Means of Egress: Placement of panels and drop-out or melt-out seam placement shall be placed so that the means of egress as required in Chapter 10 of the IBC or Section R311 of the IRC are maintained, as applicable.

3.8.2 Installation with No Ceiling Sprinklers Present: SmartSeam® may be installed throughout the ceiling when no ceiling sprinklers are present.

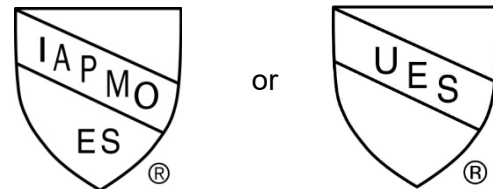
4.0 PRODUCT DESCRIPTION

4.1 Product Information: SmartSeam® is a suspended cover product with a heat-reactive seam. The product is used in cases when a facility is undergoing a reroofing or other construction project and uses SmartSeam® as a suspended cover to capture falling dust and debris during that project. When the seam is activated by the heat of a fire, the seam releases the suspended cover which opens, permitting the sprinklers located above the cover to function uninterrupted.

The SmartSeam® product is produced from an extruded polypropylene/polyethylene-scrim film material. The finished sheets are composed of smaller individual sheets, each 5 feet (1524 mm) x 6 feet (1829 mm) finished dimension, factory sewn together with a proprietary joining seam. The final finished sheet is sized based on project requirements.

5.0 IDENTIFICATION

SmartSeam® is identified by the (Tuffwrap Installations Inc.) name and trademark, product name, and evaluation report number (ER-706). Either IAPMO Uniform Evaluation Service Mark of Conformity may also be used as shown below:



IAPMO UES ER-706

6.0 SUBSTANTIATING DATA

6.1 Test reports are from laboratories in compliance with ISO/IEC 17025.

6.2 Data in accordance with IAPMO UES Evaluation Criteria for Temporary Ceiling Construction Barriers (EC043-2021).

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Tuffwrap Installations, Inc's SmartSeam® to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at the location noted in Section 2.7 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org