



# **Approval Standard for Class 1 Panel Roofs**

**Class Number 4471**

**March 2010**

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# Foreword

The FM Approvals certification mark is intended to verify that the products and services described will meet stated conditions of performance, safety and quality useful to the ends of property conservation. The purpose of Approval Standards is to present the criteria for FM Approval of various types of products and services, as guidance for FM Approvals personnel, manufacturers, users and authorities having jurisdiction.

Products submitted for certification by FM Approvals shall demonstrate that they meet the intent of the Approval Standard, and that quality control in manufacturing and/or applications shall ensure a consistently uniform and reliable product or service. Approval Standards strive to be performance-oriented and to facilitate technological development.

For examining equipment, materials and services, Approval Standards:

- a) must be useful to the ends of property conservation by preventing, limiting or not causing damage under the conditions stated by the Approval listing; and
- b) must be readily identifiable.

Continuance of Approval and Listing depends on compliance with the Approval Agreement, satisfactory performance in the field, on successful re-examinations of equipment, materials and services as appropriate, and on periodic follow-up audits of the manufacturing facility or service/application.

FM Approvals LLC reserves the right in its sole judgment to change or revise its standards, criteria, methods or procedures.

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# 1 INTRODUCTION

## 1.1 Purpose

- 1.1.1 This standard states Approval requirements for Class 1 Panel Roofs. A Class 1 Panel Roof is one which meets the criteria of this standard for fire, wind, foot traffic, and hail damage resistance.
- 1.1.2 Approval criteria may include, but are not limited to, performance requirements, marking requirements, examination of manufacturing facility (ies), audit of quality assurance procedures, and a follow-up program.

## 1.2 Scope

- 1.2.1 This standard sets performance requirements for panel roofs which include all components necessary for installation of the panel roof assembly. The assembly which exhibits low fire spread below and above the panel, adequate simulated wind uplift resistance, and adequate strength and durability during the Approval examination will qualify as a Class 1 assembly. To be rated as a Class 1 panel roof assembly, only Class 1 Approved components may be used.
- 1.2.2 This standard applies to any component intended for use in assembling a panel roof, including metal and plastic panel roofs.
- 1.2.3 The performance of a panel roof depends in part on all components in its makeup, and on how these components interact. It is therefore necessary to evaluate the roof assembly as a whole when measuring the potential for fire spread on the underside and exterior of the roof, and/or its ability to resist wind forces.

## 1.3 Basis for Requirements

- 1.3.1 The requirements of this standard are based on experience, research and testing, and/or the standards of other organizations. The advice of manufacturers, users, trade associations, jurisdictions and loss control specialists was also considered.
- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of panel roofs for the purpose of obtaining Approval. Panel roofs having characteristics not anticipated by this standard may be FM Approved if performance equal, or superior, to that required by this standard is demonstrated, or if the intent of the standard is met. Alternatively, panel roofs which meet all of the requirements identified in this Standard may not be FM Approved if other conditions which adversely affect performance exist or if the intent of this standard is not met.

## 1.4 Basis for Approval

Approval is based upon satisfactory evaluation of the product and the manufacturer in the following major areas:

- 1.4.1 Examination and tests on production samples shall be performed to evaluate
- the suitability of the product;
  - the performance of the product as specified by the manufacturer and required by FM Approvals; and as far as practical,

- the durability and reliability of the product.
- 1.4.2 An examination of the manufacturing facilities and audit of quality control procedures is made to evaluate the manufacturer's ability to consistently produce the product which is examined and tested, and the marking procedures used to identify the product. These examinations may be repeated as part of FM Approvals' product follow-up program.

### 1.5 Basis for Continued Approval

Continued Approval is based upon:

- production or availability of the product as currently FM Approved;
- the continued use of acceptable quality assurance procedures;
- satisfactory field experience;
- compliance with the terms stipulated in the Approval report;
- satisfactory re-examination of production samples for continued conformity to requirements; and
- satisfactory Facilities and Procedures Audits (F&PAs) for both factory and field fabricated panel roofs conducted as part of FM Approvals' product follow-up program.

Also, as a condition of retaining Approval, manufacturers may not change a product or service without prior authorization by FM Approvals.

### 1.6 Effective Date

- 1.6.1 The effective date of an Approval standard mandates that all products tested for Approval after the effective date shall satisfy the requirements of that standard. Products FM Approved under a previous edition shall comply with the new version by the effective date or else forfeit Approval.
- 1.6.2 This standard will be effective immediately upon publication.

### 1.7 System of Units

Units of measurement used in this Standard are United States (U.S.) customary units. These are followed by their arithmetic equivalents in International System (SI) units, enclosed in parentheses. The first value stated shall be regarded as the requirement. The converted equivalent value may be approximate. Appendix A lists the selected units and conversions to SI units for measures appearing in this standard. Conversion of U.S. customary units is in accordance with BSR/IEEE/ASTM SI 10, *Standard for Use of the International System of Units (SI): The Modern Metric System*.

### 1.8 Applicable Documents

The following standards, test methods, and practices are referenced in this standard:

FM Approval Standard 4880, Class 1 Fire Rating of Insulated Wall or Wall & Roof/Ceiling Panels, Interior Finish Materials or Coatings, and Exterior Wall Systems;

FM Global Property Loss Prevention Data Sheet 1-28, Wind Design;

FM Global Property Loss Prevention Data Sheet 1-31, Metal Roof Systems;

FM Global Property Loss Prevention Data Sheet 1-34, Hail Damage;

ASTM E 108, Standard Test Methods for Fire Tests of Roof Coverings;

BSR/IEEE/ASTM SI 10, *Standard for Use of the International System of Units (SI): The Modern Metric System*.

FM Approvals 12 x 24 Wind Uplift Tests for Standing Seam, Lap Seam and Composite Panel Roof Coverings

FM Approvals Construction Materials Calorimeter Test Procedures

FM Approvals Test Method for Determining the Susceptibility to Hail Damage of Roof Coverings

FM Approvals 4471 Foot Traffic Resistance Test Procedures

## 1.9 Definitions

For purposes of this standard, the following terms apply:

*Heat Release Rate* — The Btu's released by an assembly within specific time frames. The total heat released is added over the length of the FM Approvals calorimeter test (30 minutes). The maximum or peak heat release rate is measured over a shorter period of time (either 3, 5, or 10 minutes) or as the average for the test duration.

*Insulation* — Is any of a variety of materials designed to reduce the flow of heat, either from, or into, a building.

*Metal Panel* — (1) A single metal sheet formed into a specified profile. (2) A composite assembly formed to a specified profile and consisting of an insulating core or batt material with an exterior metal skin.

*Permanent Deformation*—Any displacement of a panel or component that remains after the load has been removed. Panel deflection that can be removed by mechanical means not involving special equipment and without additional displacement shall not be considered permanent deformation.

*Plastic Panel* — (1) A single plastic sheet formed into a specified profile. (2) A composite assembly formed to a specified profile and consisting of an insulating core or batt material with an exterior plastic skin.

*Roof Assembly* —A system of interacting roof components (including the roof deck) designed to weatherproof, and normally, to insulate a building's top surface.

*Wind Uplift* — Wind-induced forces on a roof system or components in a roof system. Wind uplift generally includes a negative pressure component caused by wind being deflected around and across the surfaces of a building and a positive pressure component from air flow beneath the roof deck.

## 2 GENERAL INFORMATION

### 2.1 Product Information

The requirements of this standard shall be used to measure and describe the performance of Class 1 Panel roofs in response to exposure from heat, wind, foot traffic, and hail under controlled laboratory conditions. The results of these controlled exposures shall not be used to describe or appraise actual exposure conditions, since such conditions may vary widely. The Approval examination includes fire, simulated wind uplift, and other tests as noted. A complete review of construction and applications specifications shall be conducted to assure, as far as possible, a practical and reliable installation. Inspection of the product manufacturing facility and of at least one field installation, at the discretion of FM Approvals, shall be conducted to assure conformance with the required tests and specifications.

### 2.2 Approval Application Requirements

To apply for an Approval examination the manufacturer, or its authorized representative, should submit a request to:

Materials Director  
FM Approvals  
1151 Boston-Providence Turnpike  
PO Box 9102  
Norwood, MA 02062  
U.S.A.

The manufacturer shall provide the following preliminary information with any request for Approval consideration:

- A complete list of all models, types, sizes, and options for the products or services being submitted for Approval consideration;
- General assembly drawings, complete set of manufacturing drawings, materials list, anticipated marking format, nameplate format, brochures, sales literature, specification sheets, installation, operation and maintenance procedures;
- The number and location of manufacturing facilities.
- The number of portable roll formers and the locations where the equipment is stored and maintained.
- All documents shall identify the manufacturer's name, document number or other form of reference, title, date of last revision, and revision level. All documents shall be provided with English translation.
- The formulation and specifications for the panel roofs and panel roof components shall be submitted to FM Approvals for review and be kept on file at FM Approvals on a confidential basis.

### 2.3 Requirements for Samples for Examination

- 2.3.1 Following authorization of an Approval examination, the manufacturer may be required to submit samples for examination and testing based on the Approvals requested. Sample requirements will be determined by FM Approvals following review of the preliminary information.
- 2.3.2 Requirements for samples may vary depending on design features, results of prior or similar testing, and results of any foregoing tests.
- 2.3.3 The manufacturer shall submit samples representative of production. Any decision to use test data generated using prototypes is at the discretion of FM Approvals.
- 2.3.4 It is the manufacturer's responsibility to provide any necessary test fixtures or special tools, such as those which may be required to evaluate the products for Approval.

### 2.4 Recognition

The panel roof assembly meeting the requirements of this standard shall receive a listing in RoofNav as a Class 1-X-Y panel roof; where X indicates the Hail Damage Resistance (MH or SH) and Y indicates the Windstorm Classification (60, 75, 90, 105, 120, ...). However, the absence of a Hail Damage Resistance indicates SH. For example a Class 1-120 panel roof indicates the Class 1 panel roof has a severe hail damage resistant rating and a 1-120 Windstorm Classification.

Approved panel roofs will also be listed with the minimum and maximum slopes, where such restrictions apply, and the fire classification from above deck exposures at the indicated slopes.

## 3 GENERAL REQUIREMENTS

### 3.1 Review of Documentation

- 3.1.1 During the initial investigation and prior to physical testing, the manufacturer's specifications and panel roof details shall be reviewed to assess the ease and practicality of installation and use. The Approval investigation shall define the limits of the Approval.

### 3.2 Markings

- 3.2.1 Marking on the product or, if not possible due to size, on its packaging or label accompanying the product, shall include the following information:
- name and address of the manufacturer or marking traceable to the manufacturer;
  - date of manufacture or code traceable to date of manufacture or lot identification;
  - model number, size, rating, capacity, etc., as appropriate.

When hazard warnings are needed, the markings should be universally recognizable.

- 3.2.2 The model or type identification shall correspond with the manufacturer's catalog designation and shall uniquely identify the product as FM Approved. The manufacturer shall not place this model or type identification on any other product unless covered by a separate agreement.
- 3.2.3 The Approval Mark (see Appendix B) shall be displayed visibly and permanently on the product and/or packaging as appropriate. The manufacturer shall not use this Mark on any other product unless such product is covered by a separate report.
- 3.2.4 All markings shall be legible and durable.

### 3.3 Manufacturer's Installation and Operation Instructions

The manufacturer shall provide the user with:

- instructions for the installation, maintenance, and operation of the product;
- facilities for repair of the product and supply replacement parts; and
- services to ensure proper installation, inspection, or maintenance for products of such nature that it would not be reasonable to expect the average user to be able to provide such installation, inspection, or maintenance.

### 3.4 Calibration

All examinations and tests performed in evaluation to this Standard shall use calibrated measuring instruments traceable and certified to acceptable national standards.

### 3.5 Observation of Test Sample Production

A representative of FM Approvals may witness production of, and place an identification mark on, each panel to be evaluated at the discretion of FM Approvals. If the panel roof has one or more plastic components, a representative of FM Approvals may also witness the production of the plastic components at the discretion of FM Approvals.

## 4 PERFORMANCE REQUIREMENTS

In order to qualify as a Class 1 panel roof assembly, each panel roof shall satisfy the following performance criteria necessary to reduce the potential for fire spread and hail damage, and to obtain satisfactory wind uplift performance.

### 4.1 Combustibility – From Below Roof Assembly

#### 4.1.1 Requirement

A metal panel roof assembly which incorporates insulation in addition to the panel clip and metal panel roof (and, if applicable, including liner, thermal barrier and/or vapor retarder) and any non-metal panel roof assembly, when subjected to a fire exposure from below shall not exhibit fuel contribution rates in excess of the values in Table 1.

Additionally, there shall be no dropping of flaming particles into the furnace or uncontrolled flaming on the exterior surface of the sample.

The below deck combustibility test procedures are not required for panels that have met the requirements of FM Approval Standard 4880.

Tests of alternate constructions may be waived if considered less hazardous than those previously tested.

*Table 1:*

<i>Time Interval min</i>	<i>Max Fuel Contribution Rate</i>	
	<i>Btu/ft<sup>2</sup>/Min</i>	<i>(kW/m<sup>2</sup>)</i>
3	410	(77.6)
5	390	(73.8)
10	360	(68.1)
Avg. (30 min)	285	(54.0)

4.1.2 Tests/Verification

The roof assembly when subjected to the FM Approvals Construction Materials Calorimeter Test shall not exhibit fuel contribution rates in excess of the values shown in Table 1 above.

**4.2 Combustibility – From Above Roof Assembly**

4.2.1 Requirement

A panel roof assembly shall not exceed the specific rating coinciding with the fire exposure referenced below. Since a panel roof assembly may incorporate components (coating, caulking, insulation, facing, etc.) which may support combustion when subjected to a simulated fire exposure to the outside of the panel roof, the panel roof assembly shall meet this requirement.

The minimum classification for receiving Approval shall be Class (1) C; i.e., the roof covering and substrate must be effective against a light test exposure, and “afford a light degree of fire protection to the roof deck.” The panel, its coating and substrate shall not slip from position nor present a flying brand hazard.

During the tests there shall be no flaming or burning particles blown off the test assembly and reaching the floor. For combustible panels there shall also be no burn through the panel roof. However, exposed glass reinforcement of fiber reinforced plastics shall not be considered burn through.

Tests of alternate constructions may be waived if considered less hazardous than those previously tested

4.2.2 Tests/Verification

Class A (severe exposure), Class B (moderate exposure), or Class C (light exposure) Tests in accordance with ASTM E 108 Fire Test of Roof Coverings. In addition, for the Spread of Flame tests, flame shall not be allowed to spread to more than one lateral edge of the exposed panel roof beyond 12 in. (305 mm) of the leading (flame) edge of the test sample.

Panels having a combustible bottom surface shall be subject to the spread of flame, burning brand, and intermittent flame exposure tests. Panels with a noncombustible bottom surface shall be

subject to the spread of flame tests only. Systems consisting entirely of noncombustible components (e.g. galvanized steel) shall not be subject to this test and shall be considered meeting Class A at 5 in 12.

**4.3 Wind Uplift Resistance**

4.3.1 Requirement

The candidate panel roof assembly comprised of a specific combination of components shall possess adequate physical properties to resist 1) a specified minimum uplift pressure without disengagement or fracture of any component and 2) half the specified minimum uplift pressure without any permanent deformation of any component. Any separation, permanent deformation, withdrawal, or fracture within the panel roof assembly is considered a failure. The required minimum uplift pressure for the desired Windstorm Classification shall be per Table 2, in increments of 15 psf.

*Table 2:*

<i>Windstorm Classification</i>	<i>Minimum Uplift Pressure Psf (kPa)</i>
Class 1-60	60 (2.9)
Class 1-75	75 (3.6)
Class 1-90	90 (4.3)
Class 1-105	105 (5.0)
Class 1-120	120 (5.7)
Class 1-135	135 (6.5)
Class 1-150	150 (7.2)
Class 1-165	165 (7.9)
Class 1-180	180 (8.6)
Etc.	Etc.

4.3.2 Tests/Verification

The wind uplift test procedures shall be in accordance with FM Approvals 12 x 24 Wind Uplift Tests for Standing Seam, Lap Seam and Composite Panel Roof Coverings.

Additional tests may be required, at the discretion of FM Approvals, depending on design features and results of any foregoing tests.

Any test following a failure shall be acceptable only at the discretion of FM Approvals and with a technical justification of the conditions or reasons for failure.

**4.4 Foot Traffic Resistance**

4.4.1 Requirement

The ability of the panel roof assembly to resist foot traffic shall be verified. There shall be no puncture of the panel roof and no separation or disengagement of the side or end laps.

#### 4.4.2 Tests/Verification

The panel roof shall resist foot traffic damage in accordance with FM Approvals 4471 Foot Traffic Resistance Test Procedures.

### 4.5 Hail Damage Resistance

#### 4.5.1 Requirement

Class 1 panel roofs shall be able to withstand the effects of hail. Panels shall show no evidence of puncture or chipping, peeling, blistering, cracking, or crazing of the coating when examined under 10X magnification.

Tests of alternate constructions may be waived if considered less critical than those previously tested.

#### 4.5.2 Tests/Verification

The panel roof shall resist hail damage in accordance with FM Approvals Test Method for Determining the Susceptibility to Hail Damage of Roof Coverings.

## 5 OPERATIONS REQUIREMENTS

A quality assurance program is required to assure that subsequent panel roof(s) produced by the manufacturer shall present the same quality and reliability as the specific panel roof assembly(s) examined. Design quality, conformance to design, and performance are the areas of primary concern.

- Design quality is determined during the examination and tests, and is documented in the Approval Report.
- Continued conformance to this Standard is verified by the Facilities and Procedures Audit (F&PA).
- Quality of performance is determined by field performance and by periodic re-examination and testing.

### 5.1 Demonstrated Quality Control Program

5.1.1 The manufacturer shall demonstrate a quality assurance program which specifies controls for at least the following areas:

- existence of corporate quality assurance guidelines;
- incoming quality assurance, including testing;
- in-process quality assurance, including testing;
- final inspection and tests;
- equipment calibration;
- drawing and change control;
- packaging and shipping; and
- handling and disposition of non-conforming materials.

### 5.1.2 Documentation/Manual

There should be an authoritative collection of procedures/policies. It should provide an accurate description of the quality management system while serving as a permanent reference for implementation and maintenance of that system. The system should require that sufficient records are maintained to demonstrate achievement of the required quality and verify operation of the quality system.

### 5.1.3 Records

To assure adequate traceability of materials and products, the manufacturer shall maintain a record of all quality assurance tests performed, for a minimum period of two years from the date of manufacture.

### 5.1.4 Drawing and Change Control

- The manufacturer shall establish a system of product configuration control that shall allow no unauthorized changes to the product. Changes to critical documents, identified in the Approval Report, must be reported to, and authorized by, FM Approvals prior to implementation for production.
- The manufacturer shall assign an appropriate person or group to be responsible for, and require that, proposed changes to FM Approved or Listed products be reported to FM Approvals before implementation. The manufacturer shall notify FM Approvals of changes in the product or of persons responsible for keeping FM Approvals advised by means of FM Approvals' Form 797, FM Approved Product/Specification-Tested Revision Report or Address/Main Contact Change Report.
- Records of all revisions to all FM Approved products shall be maintained.

## 5.2 Facilities and Procedures Audit (F&PA)

### 5.2.1 Factory Fabricated Panel roofs

An audit of the manufacturing facility is part of the Approval investigation to verify implementation of the quality assurance program. Its purpose is to determine that the manufacturer's equipment, procedures, and quality program are maintained to insure a uniform product consistent with that which was tested and FM Approved.

Unannounced follow-up inspections are conducted to assure continued quality control and product uniformity.

### 5.2.2 Field Fabricated Panel roofs

An inspection of the manufacturer's location where quality control of the field fabricated panel roofs occurs shall be a part of the Approval investigation. Its purpose is to determine that equipment (e.g. portable roll former), procedures, and the manufacturer's quality controls are properly maintained and produce a product of the same quality as initially tested.

Unannounced audits of the manufacturer's location where quality control of the field fabricated panel roofs occurs are conducted to assure continued quality and product uniformity.

Unannounced audits of construction sites where panel roofs are field fabricated may also be made at the discretion of FM Approvals.

5.2.3 These audits shall be conducted periodically but at least annually by FM Approvals or its representatives.

5.2.4 FM Approved products or services shall be produced or provided at or from the location(s) audited by FM Approvals and as specified in the Approval Report. Manufacture of products bearing the

Approval Mark is not permitted at any other location without prior written authorization by FM Approvals.

### **5.3 Installation Inspections**

Field inspections may be conducted to review an installation. The inspections are conducted to assess ease of application, and conformance to written specifications. When more than one application technique is used, one or all may be inspected at the discretion of FM Approvals.

### **5.4 Manufacturer's Responsibilities**

The manufacturer shall notify FM Approvals of changes in product construction, components, raw materials, physical characteristics, coatings, component formulation or quality assurance procedures prior to implementation.

**APPENDIX A: UNITS OF MEASUREMENT**

LENGTH:	in. - "inches"; (mm - "millimeters") mm = in. x 25.4  ft - "feet"; (m - "meters") m = ft x 0.3048
AREA:	in <sup>2</sup> - "square inches"; (mm <sup>2</sup> - "square millimeters") mm <sup>2</sup> = in <sup>2</sup> x 6.4516 x 10 <sup>2</sup>  ft <sup>2</sup> - "square feet"; (m <sup>2</sup> - "square meters") m <sup>2</sup> = ft <sup>2</sup> x 0.0929
MASS:	lb - "pounds"; (kg - "kilograms") kg = lb x 0.454
PRESSURE:	psi - "pounds per square inch"; (bar - "bar") kPa = psi x 6.895  bar - "bar"; (kPa - "kilopascals") bar = kPa x 0.01 bar = psi x 0.06895
HEAT:	Btu - "British thermal units"; (J - "joules") J = Btu x 1.0551 x 10 <sup>3</sup>
HEAT RELEASE RATE:	Btu/min - "British thermal units per minute"; (kW - "kilowatts") kW = Btu/min x 0.0176
TEMPERATURE:	°F - "degrees Fahrenheit"; (°C - "degrees Celsius") °C = (°F - 32) x 0.556
LIQUID VOLUME:	gal - "gallons"; (L - "liter") L = gal x 3.785  L - "liter"; (dm <sup>3</sup> - "cubic decimeters") L = dm <sup>3</sup>
FLOW RATE:	gal/min - "gallon per minute"; (L/min - "liters per minute") L/min = gal/min x 3.785

**APPENDIX B: FM APPROVALS CERTIFICATION MARKS**

FM Approvals certifications marks are to be used only in conjunction with products or services that have been Approved by FM Approvals and in adherence with usage guidelines.



**FM APPROVED mark:**

Authorized by FM Approvals as a certification mark for any product that has been FM Approved. There is no minimum size requirement for the mark, but it must be large enough to be readily identifiable. The mark should be produced in black on a light background, or in reverse on a dark background.



**Cast-On FM Approvals marks:**

Where reproduction of the FM Approved mark described above is impossible because of production restrictions, use these modified versions of the FM Approved mark. There is no minimum size requirement for the mark, but it must be large enough to be readily identifiable.



**FM Approved Mark with “C” only:**

Authorized by FM Approvals as a certification mark for any product that has been evaluated by FM Approvals in accordance with Canadian codes and standards. There is no minimum size requirement for the mark, but it must be large enough to be readily identifiable. The mark should be produced in black on a light background, or in reverse on a dark background.



**FM Approved mark with “C” and “US”:**

Authorized by FM Approvals as a certification mark for any product that has been evaluated by FM Approvals in accordance with US and Canadian codes and standards. There is no minimum size requirement for the mark, but it must be large enough to be readily identifiable. The mark should be produced in black on a light background, or in reverse on a dark background.

# FM Approvals Certification Marks

## USAGE GUIDELINES

All FM Approvals certification marks are the sole property of FM Approvals LLC (“FM Approvals”) and are registered or the subject of applications for registration in the United States and many other countries. They are for use only according to these guidelines.

FM Approvals certification marks may be used only on FM Approved products and related product packaging, in advertising material, catalogs and news releases. Use of FM Approvals certification marks on such material is not a substitute for use of the complete FM Approvals certification mark on FM Approved products and/or product packaging.

No FM Approvals certification mark or aspect thereof may be incorporated as part of a business name, Internet domain name, or brand name/trademark for products/product lines. This includes both design aspects (the FM Approvals “diamond,” etc.) and word aspects (“FM,” “Approved,” etc.). The use of any FM Approvals certification mark as a trademark is strictly prohibited.

The Approval Standard number or class number may not be incorporated as part of a business name, Internet domain name, or brand name/trademark for products/product lines. For example, a company may not say “ABC Company’s 4100 Fire Door is FM Approved”; the proper terminology is, “ABC Company’s Fire Door is FM Approved per Approval Standard 4100.”

FM Approvals certification marks, except for the FM Approvals Quality System Registration mark, may not be used on business stationery/cards/signage because this could mischaracterize the relationship with FM Approvals. Additionally, these items should not reference any FM Approvals certification mark.

Products or services may not be marketed under any mark or name similar to “FM Global,” “FM Approvals” or any of the FM Approvals certification marks. Further, products or services may not be marketed to imply a relationship beyond the scope of any Approval made by FM Approvals.

When an FM Approvals certification mark is used in advertising material or on product packaging, all material must reflect the specific circumstances under which the product was FM Approved. The material must clearly differentiate between products that are FM Approved and those that are not, and may not, in any way, imply a more substantial relationship with FM Approvals.

A company may not reference the intent to submit a product for Approval or the expectation that a company will have a certain product FM Approved in the future. For example, a company may not state, “Approval by FM Approvals pending” or “Approval by FM Approvals applied for.”

FM Approvals certification marks should not be preceded or followed by a qualifier that indicates a degree of certification or acceptability. For example, “exceeds,” “first” or “only” may not be used to qualify any FM Approvals certification mark.

Only original artwork issued by FM Approvals should be used. The FM Approvals certification marks should not be altered in any way other than to resize the artwork proportionately. Unacceptable uses of the marks include, but are not limited to, adding/deleting wording or artwork, reducing the artwork to an illegible size, animation or distortion.

The text of the FM Approvals certification marks may not be translated into any language other than English.

FM Approvals certification marks must appear in a size and location that is readily identifiable, but less prominent than the name of the owner of the certification or the manufacturer/seller/distributor of the certified products.