



Approval Standard for Panels Used in Data Processing Center Hot and Cold Aisle Containment Systems

Class Number 4884

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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 shall ensure a consistently uniform and reliable product. Approval Standards strive to be performance-oriented. They are intended 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.

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 Panels Used in Data Processing Center Hot and Cold Aisle Containment Systems.
- 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 surveillance audit program.

1.2 Scope

- 1.2.1 This standard applies to panels for use in data processing center hot and cold aisle containment systems.
- 1.2.2 Panels evaluated by this standard are considered FM Approved with an unlimited height rating and may function as both wall and ceiling panels used in data processing center hot and cold aisle containment systems.
- 1.2.3 Framing and accessories installed with FM Approved panels used in data processing center hot and cold aisle containment systems must be non-combustible.
- 1.2.4 This standard evaluates panels used in data processing center hot and cold aisle containment systems only. For Class 1 Building Panels or Interior Finish Materials and Class 1 Building Panels or Interior Finish Materials for Smoke Sensitive Occupancies FM Approvals requires successful examination in accordance with the following applicable standards:
 - FM Approvals Standard 4880, Class 1 Fire Rating of Building Panels or Interior Finish Materials,
 - FM Approvals Standard 4882, Class 1 Interior Wall and Ceiling Materials or Systems for Smoke Sensitive Occupancies
- 1.2.5 This standard is intended to evaluate only those hazards investigated and is not intended to determine suitability for the end use of a product.
- 1.2.6 This standard shall not qualify chlorinated materials such as Polyvinyl Chloride (PVC) or Chlorinated Polyvinyl Chloride (C-PVC).
- 1.2.7 This standard is limited to the evaluation of materials for use as panels in data processing center hot and cold aisle containment systems. Materials requiring FM Approval as a drop out ceiling panel are tested in accordance with FM 4651.
- 1.2.8 This standard does not evaluate the corrosivity of the products of combustion of these materials.

1.3 Basis for Requirements

- 1.3.1 The requirements of this standard are based on experience, research and testing, Approval Standard for Class 1 Fire Rating of Interior Wall and Ceiling Materials or Systems for Smoke Sensitive Occupancies, Class Number 4882, Test Standard for FM Approvals Cleanroom Materials Flammability Test Protocol, Class Number 4910 and American National Standard for Clean Room Materials Flammability Test Protocol ANSI/FM Approvals 4910. The advice of manufacturers, users, trade associations and loss control specialists was also considered.

- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of panels used in data processing center hot and cold aisle containment systems for the purpose of obtaining Approval. Panels used in data processing center hot and cold aisle containment systems 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, panels used in data processing center hot and cold aisle containment systems which meet all 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.
- 1.3.3 Meeting the requirements of this standard qualifies panels as FM Approved panels used in data processing center hot and cold aisle containment systems. Requirements prohibit component substitutes without prior authorization by FM Approvals.

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 for its intended use as an FM Approved panel used in data processing center hot and cold aisle containment systems;
 - 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 when used as an FM Approved panel used in data processing center hot and cold aisle containment systems
- 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' surveillance audit 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 Surveillance Audits 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

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.