



Examination Standard for Cleanroom Materials

Class Number 4910

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Foreword

This standard 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 a this standard is to present the criteria for examination of various types of products and services.

Examination in accorandance with this standard shall demonstrate compliance and verify that quality control in manufacturing shall ensure a consistent and reliable product.

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1 INTRODUCTION

1.1 Purpose

- 1.1.1 This test standard states testing and certification requirements for the evaluation of materials used in cleanroom occupancies mainly, but not restricted, for use in the semiconductor industry. The test evaluates the materials' fire propagation behavior and potential for smoke contamination using two indices: Fire Propagation Index (FPI) and Smoke Damage Index (SDI).
- 1.1.2 This test standard does not qualify end use products for certification based solely on these test results, as the end use of the product will determine the applicable certification standard requirements, if available, which will also have to be met to achieve certification.
- 1.1.3 Testing and certification 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 program.

1.2 Scope

- 1.2.1 This test standard describes minimum performance requirements for materials which are intended for use in cleanroom facilities. This test standard evaluates the ability of the components to limit fire spread and smoke damage.
- 1.2.2 This standard is intended to verify that the product as described will meet minimum specific stated conditions of performance, safety, and quality, useful in determining the potential suitability for end-use conditions of these products.

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/or loss control specialists was also considered.
- 1.3.2 The requirements of this standard reflect tests and practices used to examine characteristics of cleanroom materials for the purpose of obtaining Certification. Cleanroom materials having characteristics not anticipated by this standard may be certified if performance equal, or superior, to that required by this standard is demonstrated.
- 1.3.3 Meeting these requirements does not qualify an end use product for certification. Additional testing and requirements for certification are specified in the certification standards which are based on the end use of the product.

1.4 Basis for Certification

Certification 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 for certification; and as far as practical,
 - the durability and reliability of the product.