

Institute of Environmental Sciences and Technology

IEST-RP-CC001.6

Contamination Control Division
Recommended Practice 001.6

HEPA and ULPA Filters



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CONTENTS

SECTION

| | | |
|----|---------------------------------|----|
| 1 | SCOPE AND LIMITATIONS | 7 |
| 2 | REFERENCES | 7 |
| 3 | TERMS AND DEFINITIONS | 11 |
| 4 | PERFORMANCE | 12 |
| 5 | CONSTRUCTION GRADES | 15 |
| 6 | ALLOWABLE MATERIALS | 16 |
| 7 | DESIGN | 17 |
| 8 | CONSTRUCTION REQUIREMENTS | 20 |
| 9 | TESTING | 21 |
| 10 | LABELING | 23 |
| 11 | QUALITY ASSURANCE | 24 |

FIGURES

| | | |
|---|---------------------------------------------|----|
| 1 | SEPARATOR-STYLE FILTER | 18 |
| 2 | SEPARATORLESS-STYLE FILTER | 18 |
| 3 | MINI PLEAT SEPARATORLESS-STYLE FILTER | 19 |

TABLES

| | | |
|----|----------------------------------------------------------------------------------|----|
| 1 | RECOMMENDED TEST AND MINIMUM RATING FOR FILTER TYPES A THROUGH K | 22 |
| C1 | FILTER CLASSIFICATIONS AND RATINGS FOR IEST-RP-CC001 AND ISO 29463 | 32 |
| D1 | GENERAL DESCRIPTIONS OF FILTER TYPES | 32 |
| D2 | PHARMACEUTICAL, BIOTECHNOLOGY, MEDICAL DEVICE, AND HEALTHCARE APPLICATIONS | 33 |
| D3 | NUCLEAR, DEPARTMENT OF ENERGY, AND NUCLEAR REGULATORY COMMISSION | 35 |
| D4 | MICRO-ELECTRONICS APPLICATIONS | 36 |
| D5 | AEROSPACE APPLICATIONS | 36 |
| D6 | PAINT BOOTH APPLICATIONS | 36 |

APPENDIXES

| | | |
|---|-----------------------------------------------|----|
| A | RECOMMENDATIONS FOR PROCUREMENT | 25 |
| B | CONSTRUCTION NOTES AND RECOMMENDATIONS | 27 |
| C | OTHER FILTER TEST STANDARDS AND METHODS | 28 |
| D | FILTER SELECTION GUIDE | 32 |
| E | BIBLIOGRAPHY | 37 |

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1 SCOPE AND LIMITATIONS

This Recommended Practice (RP) covers basic provisions for HEPA (high efficiency particulate air) and ULPA (ultra-low penetration air) filter units as a basis for agreement between customers and suppliers.

Filters that meet the requirements of this RP are suitable for use in clean air devices and cleanrooms that fall within the scope of ISO 14644 and for use in supply air and contaminated exhaust systems that require extremely high filter efficiency (99.97% or higher) for submicrometer (μm) particles.

This RP describes 11 levels of filter performance, or types, and five grades of filter construction. For the types and grades that require scanning, these filter types generally apply to rectangular filters. Semi-circular, cylindrical, V-bank filters and other construction configurations may not be readily scanned and thus will not meet the requirements of the filter types requiring scanning. While many of the performance measurement techniques can be adapted to other filter configurations, the filter types as described in this RP should be applied only to rectangular, flat panel filters. The customer's purchase order should specify the level of performance and grade of construction required. The customer should also specify the filter efficiency required if the efficiency level is not covered by the performance levels specified in this RP.

NOTE: Products and procedures discussed in this RP may involve hazardous materials, operations, and equipment. This RP does not purport to address all of the safety problems associated with its use. It is the responsibility of the user to consult and establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use of this RP.

2 REFERENCES

The following documents are incorporated into this Recommended Practice to the extent specified herein. If no specific edition is cited, the most recent edition should be used. Where specific editions are cited, subsequent revisions of these publications do not automatically supersede the cited editions and users should investigate the applicability of revised editions.

2.1 Reference documents

AA: Aluminum Standards and Data 2013

ANSI A208.1: Particleboard, Mat-Formed Wood

APA PS 1: Structural Plywood

ASME AG-1: Code on Nuclear Air and Gas Treatment

ASME-NQA-1: Quality Assurance Program Requirements for Nuclear Facility Applications

ASTM A176: Standard Specification for Stainless and Heat-Resisting Chromium Steel Plate, Sheet, and Strip