

ICS 23.120

CCS P 48



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 17939-2015

Replacing GB/T 17939-2008

Nuclear grade high efficiency particulate air filters

核级高效空气过滤器

Issued on: October 9, 2015

Implemented on: May 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1 Scope	1
2 Normative references	1
4 Category	2
5 Requirements 5	6
20 Annex B (informative) nuclear grade HEPA filters other performance requirements.....	26

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 17939-2008 "nuclear grade HEPA filter," compared with the GB/T 17939-2008 major technological changes as follows:

- Modify the scope for nuclear and radiation facilities in air and gas handling systems used in nuclear grade HEPA filter (See Chapter 1, Chapter 1 of the 2008 edition);
- Modify the "Terms and definitions" (see Chapter 3, Section 3 of the 2008 edition);
- Revised "classification and specifications" split "classification", "Specifications" (see Chapter 4, Chapter 4, 2008 edition of Chapter 5);
- Added "classification principle" (see 4.1);
- Modify the "nuclear partakers HEPA air filters" to "partition plate nuclear grade HEPA filter," "nuclear-efficient convolution Air filter "to" nuclear convolution efficiency air filter "(see chapters, each chapter of the 2008 edition);
- Increased cylindrical nuclear Universities air filter classification (see 4.3);
- Modify the contents of the "dimensions bias", according to the dimensions and tolerances of form and position tolerances sub-item description, and modify the inside Capacity; increased cylindrical nuclear grade HEPA filter relevant requirements (see 62, 63, 2008 edition 5.1.2.);
- Remove the frame material "partakers of nuclear grade separator HEPA filter frame, in line with the standard provisions", which was Content as a separate section lists (see 648, 2008 edition of 5.2.1.1.);
- Increased requirements for cylindrical nuclear grade HEPA filter frame material (see 6.4.1.3);
- To increase the content of "fastener material" (see 6.4.2);

- Modify the contents of the "separator material" (see 644, 2008 Edition 5.2.3.);
- Modify the radiation resistant material requirements (see 645, 6461, 727, 2008 edition of 5.2.4.1, 5.2.5, 6.2.5...);
- Increased neoprene sheet content (see 6.4.6);

1 Scope

GB/T 17939-2015 is the Chinese national standard on nuclear grade high efficiency particulate air filters, in the field of fluid systems and general-purpose components. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 9 October 2015 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 May 2016. Classification: ICS 23.120, CCS P 48. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the nuclear grade HEPA filter classification and specifications, structure, material, performance, testing, inspection, marking, packaging, transportation, Storage and quality assurance requirements. This standard applies to nuclear and radiation facilities in nuclear HEPA filter air and gas handling systems.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 451.3-2002 paper and cardboard thickness measurement

GB/T 531.1 vulcanized rubber or thermoplastic rubber hardness test pushed Part 1. Shore hardness method (Shore hardness) Determination of

GB/T 742-2008 papermaking raw material, pulp, paper and paperboard ash

GB/T 2518 continuous hot-dip galvanized steel sheet and strip

GB/T 3198 aluminum and aluminum alloy foil

GB/T 3280 stainless steel cold-rolled steel sheet and strip Testing and evaluation of

GB/T 4744-2013 Textiles waterproof hydrostatic method

GB/T 6165 high efficiency particulate air filter performance test methods for efficiency and

resistance

GB/T 6669 Flexible cellular polymeric materials - Determination of compression set Treated zinc plating layer after the

GB/T 9799 metals and other inorganic coatings Steel

GB/T 11253 carbon structural steel sheets and strips Determination of

GB/T 12914-2008 Paper and cardboard tensile strength QB/T 2959 steel net QB/T 3897 galvanized welded wire mesh

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Nuclear grade HEPA filter nuclear grade high efficiency particulate air filter In the nuclear safety-related air and gas handling systems used to meet seismic requirements and quality assurance aspects of the HEPA filter.

3.2 Filter filterpack Mounted within the frame, implement filtering components are separated by a filter and composed.

3.3 Separator separator Or to support the filter media between the air passage to maintain a certain shape of the components, including the partition plate, glass fiber filter paper or non-combustible fiber strands.

3.4 Border case A metal frame for mounting and sealing the filter element may include end caps, flanges, side plates, pressure ring, an outer ring seal member.