

ICS 27.120.30

CCS F46



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

GB/T 13375-2017

Replacing GB/T 13375-2008

Natural uranium hexafluoride specification

天然六氟化铀技术条件

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 13375-2008 "Natural uranium hexafluoride technical conditions." This standard and GB/T 13375-2008 compared to the main technical changes are as follows:

- The scope of the "quality assurance" be amended to "quality certificate"; "This standard applies to enrichment plant for the supply of natural hexafluoride Uranium products. "Revised as" This standard applies to natural products of uranium hexafluoride. ";
 - Added the term "total absolute vapor pressure" (see 3.2);
 - Total increase of 100 °C absolute vapor pressure of 624kPa (see 3.2);
 - Modify "Total liquid absolute pressure limit" in Table 1 to "Total absolute vapor pressure limit of liquid natural uranium hexafluoride";
 - Revised Table 2, "Total Absolute Solid Pressure Limit" to "Total Absolute Pressure Limit of Solid Uranium Hexafluoride in Solid State";
 - The original standard 4.4.1 "at a temperature of 300 °C, the vapor pressure of not more than 101.3kPa non-volatile fluoride, the following impurity element The total amount of prime should not exceed 300µg/gU. "Revised as" at a temperature of 300 °C, the vapor pressure is not greater than 101.3kPa, the formation of non The total amount of the following impurity elements of volatile fluoride should not exceed 300 µg/gU. "(See 4.3.1);
 - The original standard 4.4.2 "The following impurity element content" was revised to "the following volatile impurity element content";
 - The original standard
- 5.2.1 in "liquefied containers at a temperature of 93 °C ± 3 °C conditions, with EJ/T 303 provisions of the 2S sampler or with Need to be mutually agreed on the sampling container for liquefaction sampling. "Amend to read" Fully liquefied UF₆ using a liquefied sampling device And EJ/T 303 provisions of the 2S sampler or supply and demand sides agreed sampler for liquefaction sampling. ";

--- The original standard 6.1 "in accordance with the provisions of the method of EJ/T 895." Revised as "the use of uranium hexafluoride liquefaction sub-sampling device, according to EJ/T 895 the provisions of the method. ";

--- The original standard 6.3 "at the specified temperature, with a precision of not less than 1.5 gauge pressure gauge measuring the pressure inside the container." To "in the provisions of Temperature, the use of precision of not less than 1.5 gauge pressure vessel containing uranium hexafluoride measurement of absolute pressure. When necessary (for example. System maintenance, the system pressure instability) Sampling through the sampling system, the system can be used uranium hexafluoride impurity saturation vapor pressure measurement system Set the device and method to measure the total absolute vapor pressure of the vessel. ";

1 Scope

GB/T 13375-2017 is the Chinese national standard on natural uranium hexafluoride specification, in the field of energy and heat transfer engineering. 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 29 December 2017 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 July 2018.

Classification: ICS 27.120.30, CCS F46. 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 technical requirements of natural uranium hexafluoride products, inspection rules, test methods and packaging, transport, storage, quality certificate Other requirements. This standard applies to natural uranium hexafluoride products.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 11806 radioactive material transport safety regulations

GB/T 14501.1 Determination of boron in uranium hexafluoride chemical spectroscopy GB/T 14501.3 UF

6 Determination of tungsten, molybdenum, niobium, titanium, zirconium - Determination of

chemical spectroscopy Determination of silicon in uranium hexafluoride spectrophotometric method GB/T

GB/T 14501.6 Uranium hexafluoride analysis methods Part 6. Determination of uranium

GB/T 17508 Determination of samarium, europium, gadolinium, dysprosium, cadmium, tantalum in uranium hexafluoride Chemical Spectroscopy EJ/T 303 1 liter UF₆ containers Uranium hexafluoride containers - Provisions for use EJ/T 424 3m³ uranium hexafluoride containers EJ/T 427 Determination of hydrocarbons, chlorinated hydrocarbons and partially substituted halogenated hydrocarbons in uranium hexafluoride Determination of thorium in uranium hexafluoride by spectrophotometry EJ/T 895 liquefied parting of uranium hexafluoride EJ/T 1220 Determination of metallic impurity elements in natural uranium hexafluoride Inductively coupled plasma atomic emission spectrometry (ICP- AES method) Determination of trace bromine in uranium hexafluoride by spectrophotometry

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Natural uranium hexafluoride naturaluraniumhexafluoride Uranium hexafluoride produced from natural, unirradiated uranium (containing $0.711\text{g}^{235}\text{U}/100\text{gU} \pm 0.004\text{g}^{235}\text{U}/100\text{gU}$).

3.2 Total absolute vapor pressure absolutevapourpressure Natural components of the uranium hexafluoride gas in the container to the inner wall of the real pressure.