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Nuclear fuel technology - Guidelines on the measurement of the specific surface area of uranium oxide powders by the BET method (ISO 12800:2017)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Nuclear fuel technology - Guidelines on the measurement of the specific surface area of uranium oxide powders by the BET method (ISO 12800:2017)

Technologie du combustible nucléaire - Lignes directrices pour le mesurage de l'aire massique (surface spécifique) des poudres d'oxyde d'uranium par la méthode BET (ISO 12800:2017)

Kernbrennstofftechnologie - Leitlinien für die Messung des spezifischen Oberflächenbereiches von Uranoxid-Pulvern mittels der BET-Methode (ISO 12800:2017)

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EN ISO 12800:2019 (E)

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European foreword

The text of ISO 12800:2017 has been prepared by Technical Committee ISO/TC 85 "Nuclear energy, nuclear technologies, and radiological protection" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 12800:2019 by Technical Committee CEN/TC 430 "Nuclear energy, nuclear technologies, and radiological protection" the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2019, and conflicting national standards shall be withdrawn at the latest by December 2019.

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Endorsement notice

The text of ISO 12800:2017 has been approved by CEN as EN ISO 12800:2019 without any modification.

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Nuclear fuel technology — Guidelines on the measurement of the specific surface area of uranium oxide powders by the BET method

*Technologie du combustible nucléaire — Lignes directrices pour le
mesurage de l'aire massique (surface spécifique) des poudres d'oxyde
d'uranium par la méthode BET*



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ISO 12800:2017(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 85, *Nuclear energy, nuclear technologies, and radiological protection*, Subcommittee SC 5, *Nuclear installations, processes and technologies*.

This second edition cancels and replaces the first edition (ISO 12800:2003), which has been technically revised.

Nuclear fuel technology — Guidelines on the measurement of the specific surface area of uranium oxide powders by the BET method

1 Scope

This document gives guidelines on the determination of the specific surface area of as-fabricated uranium dioxide powder by volumetric or gravimetric determination of the amount of nitrogen adsorbed on the powder, and can be applied to other similar materials, e.g. U_3O_8 , UO_2 - PuO_2 powders, and other bodies with similar surface areas, e.g. powder granules or green pellets, provided that the conditions described are fulfilled. Modifications using other adsorbing gases are included.

The method is relevant as long as the expected value is in the range between $1 \text{ m}^2/\text{g}$ and $10 \text{ m}^2/\text{g}$.

2 Normative references

There are no normative references in this document.

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