



# SLOVENSKI STANDARD

## SIST EN 14369:2015

01-junij-2015

Nadomešča:  
SIST EN 14369:2004

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**Proizvodi za pripravo pitne vode - Z železom prevlečen granulat aluminijevega oksida**

Products used for treatment of water intended for human consumption - Iron-coated granular activated alumina

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Eisenumlagertes granuliertes aktiviertes Aluminiumoxid

Produits utilisés pour le traitement de l'eau destinée à la consommation humaine - Alumine active en grains revêtue de fer

**Ta slovenski standard je istoveten z: EN 14369:2015**

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**ICS:**

13.060.20	Pitna voda	Drinking water
71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

**SIST EN 14369:2015** en,fr,de

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EUROPEAN STANDARD

EN 14369

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April 2015

ICS 71.100.80

Supersedes EN 14369:2003

English Version

## Products used for treatment of water intended for human consumption - Iron-coated granular activated alumina

Produits utilisés pour le traitement de l'eau destinée à la consommation humaine - Alumine active en grains revêtue de fer

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Eisenumlagertes granuliertes aktiviertes Aluminiumoxid

This European Standard was approved by CEN on 12 March 2015.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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**EN 14369:2015 (E)****Foreword**

This document (EN 14369:2015) has been prepared by Technical Committee CEN/TC 164 "Water supply", 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of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14369:2003.

The main technical difference between this edition and EN 14369:2003 is the updating of 9.2 in line with current legislation.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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## Introduction

In respect of potential adverse effects on the quality of water intended for human consumption caused by the product covered by this European Standard:

- a) this European Standard provides no information as to whether the product may be used without restriction in any of the Member States of the EU or EFTA;
- b) it should be noted that, while awaiting the adoption of verifiable European criteria, existing national regulations concerning the use and/or the characteristics of this product remain in force.

NOTE Conformity with this standard does not confer or imply acceptance or approval of the product in any of the Member States of the EU or EFTA. The use of the product covered by this European Standard is subject to regulation or control by National Authorities.

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**EN 14369:2015 (E)****1 Scope**

This European Standard is applicable to iron-coated granular activated alumina used for treatment of water intended for human consumption. It describes the characteristics of iron-coated granular activated alumina and specifies the requirements and the corresponding test methods for iron-coated granular activated alumina. It gives information on its use in water treatment.

**2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12901:1999, *Products used for treatment of water intended for human consumption — Inorganic supporting and filtering materials — Definitions*

EN 12902, *Products used for treatment of water intended for human consumption — Inorganic supporting and filtering materials — Methods of test*

ISO 9277, *Determination of the specific surface area of solids by gas adsorption — BET method*

**3 Terms, definitions and symbols**

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For the purposes of this document, the terms, definitions and symbols given in EN 12901:1999 apply.

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**4 Description****4.1 Identification****4.1.1 Chemical name**

Aluminium oxide (partially hydroxylated) coated with iron.

**4.1.2 Synonym or common name**

None.

**4.1.3 Chemical formula**

$\text{Al}_2\text{O}_{(3-x)}(\text{OH})_{2x} + \text{Fe}(\text{OH})_3$       x ranges from almost zero to 0,80.

**4.1.4 CAS Registry number<sup>1)</sup>**

Activated alumina: 1344-28-1.

Iron(III) sulfate: 10028-22-5.

<sup>1)</sup> Chemical Abstracts Service Registry Number.



#### 4.1.5 EINECS reference<sup>2)</sup>

Activated alumina: 215-691-6.

Iron(III) sulfate: 233-072-9.

#### 4.2 Commercial form

Iron-coated activated alumina is a granular product consisting of irregularly shaped (non-moulded) particles; the product is available in different particle sizes.

### 5 Physical properties

#### 5.1 Appearance

The product consists of brown particles of irregular shape. The product shall be generally homogeneous and shall be visibly free of extraneous matter.

#### 5.2 Particle size distribution

The particle size distribution shall be described by either;

a)

— effective size ( $d_{10}$ ) with a maximum deviation of  $\pm 5\%$ ;

— uniformity coefficient ( $U$ ) less than 1,5;

— minimum size ( $d$ ) with a maximum deviation of  $\pm 5\%$ ;

or

b) particle size range and mass fraction of oversize and undersize particles; see A.2.2.1.

The proportion of oversize plus undersize particles shall not exceed a mass fraction of 15 % and not more than a mass fraction of 5 % shall be undersized.

NOTE 1 The particle size can decrease during transportation and handling.

NOTE 2 Other values can be necessary for certain applications.

#### 5.3 Bulk density packed

The bulk density (packed) shall be greater than 600 kg/m<sup>3</sup>.

### 6 Chemical properties

This European Standard specifies the minimum purity requirements for iron-coated granular activated alumina used for the treatment of water intended for human consumption. Limits are given for impurities commonly present in the product. Depending on the raw material and the manufacturing process other impurities may be present and, if so, this shall be notified to the user and when necessary to relevant authorities.

<sup>2)</sup> European Inventory of Existing Commercial Chemical Substances.