



SLOVENSKI STANDARD

SIST EN 12174:2001

01-december-2001

Kemikalije, ki se uporabljajo za pripravo pitne vode - Natrijev heksafluorosilikat

Chemicals used for treatment of water intended for human consumption - Sodium hexafluorosilicate

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natriumhexafluorosilicat

Produits chimiques utilisés pour le traitement de l'eau destinée a la consommation humaine - Hexafluorosilicate de sodium

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ICS:

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

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 12174

August 2001

ICS 71.100.80

English version

Chemicals used for treatment of water intended for human consumption - Sodium hexafluorosilicate

Produits chimiques utilisés pour le traitement de l'eau destinée à la consommation humaine - Hexafluorosilicate de sodium

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natriumhexafluorosilicat

This European Standard was approved by CEN on 23 June 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard 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 February 2002, and conflicting national standards shall be withdrawn at the latest by February 2002.

Annex A is informative.

Annex B is normative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland 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 Standard :

- a) this 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.

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1 Scope

This European Standard is applicable to sodium hexafluorosilicate used for treatment of water intended for human consumption. It describes the characteristics of sodium hexafluorosilicate and specifies the requirements and the corresponding test methods for sodium hexafluorosilicate. It gives information on its use in water treatment.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)*.

ISO 3165, *Sampling of chemical products for industrial use - Safety in sampling*.

ISO 4281, *Sodium hexafluorosilicate for industrial use - Determination of free acidity and total hexafluorosilicate content - Titrimetric method*.

ISO 4793, *Laboratory sintered (fritted) filters - Porosity grading, classification and designation*.

ISO 5444, *Sodium hexafluorosilicate for industrial use - Determination of loss in mass at 105 °C*.

ISO 5993, *Sodium hydroxide for industrial use - Determination of mercury content - Flameless atomic absorption spectrometric method*.

ISO 6206, *Chemical products for industrial use - Sampling – Vocabulary*.

ISO 6353-1, *Reagents for chemical analysis - Part 1: General test methods*.

ISO 8213, *Chemical products for industrial use - Sampling techniques - Solid chemical products in the form of particles varying from powders to coarse lumps*.

3 Description

3.1 Identification

3.1.1 Chemical name

Disodium hexafluorosilicate.

3.1.2 Synonym or common name

Sodium silicofluoride, sodium hexafluorosilicate.

3.1.3 Relative molecular mass

188,055.

3.1.4 Empirical formula

Na₂SiF₆.

EN 12174:2001 (E)**3.1.5 Chemical formula**

Na_2SiF_6 .

3.1.6 CAS-Registry Number ¹⁾

16893-85-9.

3.1.7 EINECS reference ²⁾

240-934-8.

3.2 Commercial form

The product is a crystalline powder.

3.3 Physical properties**3.3.1 Appearance and odour**

The product is a colourless, odourless fine crystalline powder.

3.3.2 Density

The particle density of the crystals is 2,8 g/cm³ at 20 °C.

The bulk density of the product is approximately 1,5 g/cm³ at 20 °C.

3.3.3 Solubility

The solubility of the product in water is 7 g/l at 20 °C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa ³⁾

Not applicable.

3.3.6 Crystallisation point

The product melts above 500 °C.

3.3.7 Specific heat

Not known.

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¹⁾ Chemical Abstracts Service Registry Number.

²⁾ European Inventory of Existing Commercial Chemical Substances.

³⁾ 100 kPa = 1 bar.

3.3.8 Viscosity, dynamic

Not applicable.

3.3.9 Critical temperature

Not applicable.

3.3.10 Critical pressure

Not applicable.

3.3.11 Physical hardness

Not applicable.

3.4 Chemical properties

The pH value of a saturated aqueous solution (7 g/l) of sodium hexafluorosilicate is approximately 10.

Sodium hexafluorosilicate reacts with acids to form hydrofluoric acid.

4 Purity criteria

4.1 General

Limits have been given for impurities and toxic substances where these are likely to be present in significant quantities from the current production process and raw materials. If a change in the production process or raw materials leads to significant quantities of other impurities or by-products being present, this shall be notified to the user.

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4.2 Composition of commercial product

The content of sodium hexafluorosilicate shall not be less than 98 per cent by mass (% (m/m)) (Na_2SiF_6).

4.3 Impurities and main by-products

The content of insoluble matter shall not exceed 0,5 % (m/m).

The content of moisture shall not exceed 0,3 % (m/m).

4.4 Chemical parameters

The product shall conform to the requirements specified in Table 1.