SLOVENSKI STANDARD
SIST EN 12173:2005

01-september-2005

Nadomešča:
SIST EN 12173:2000

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

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

Produkt zur Aufbereitung von Wasser den menschlichen Gebrauch - Natriumfluorid

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

Ta slovenski standard je istoveten z: **EN 12173:2005**

ICS:

13.060.20	Pitna voda	Drinking water
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EUROPEAN STANDARD

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English Version

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

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

Produkt zur Aufbereitung von Wasser den menschlichen Gebrauch - Natriumfluorid

This European Standard was approved by CEN on 12 May 2005.

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 Central Secretariat 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 Central Secretariat 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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Contents

Foreword

This European Standard (EN 12173:2005) 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of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

This document supersedes EN 12173:1998.

Significant technical differences between this edition and EN 12173:1998 are as follows:

— deletion of the reference to EU Directive 80/778/EEC of July, 15 1980 in order to take into account the latest Directive in force (see [1]).

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

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 European 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.

1 Scope

This European Standard is applicable to sodium fluoride used for treatment of water intended for human consumption. It describes the characteristics of sodium fluoride and specifies the requirements and the corresponding test methods for sodium fluoride. It gives information on its use in water treatment. It also determines the rules relating to safe handling and use (see Annex B).

2 Normative references

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

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

ISO 2831 *Sodium fluoride for industrial use - Determination of water-insoluble matter*

ISO 2832 *Sodium fluoride for industrial use - Determination of moisture content*

ISO 2833 *Sodium fluoride for industrial use - Determination of fluorine content - Modified Willard-Winter-method*

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

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

Sodium fluoride.

3.1.2 Synonym or commons name

Sodium fluoride.

3.1.3 Relative molecular mass

42.

3.1.4 Empirical formula

NaF.

3.1.5 Chemical formula

NaF.

3.1.6 CAS-Registry Number[1)]

7681-49-4.

3.1.7 EINECS reference[2)]

231-667-8.

3.2 Commercial form

The product is a solid (crystals or powder).

3.3 Physical properties

3.3.1 Appearance and odour

The product is a colourless fine crystalline odourless powder or crystals.

3.3.2 Density

The density of the crystals is 2,8 g/cm^3 at 20 °C.

The bulk density of the product is 0,6 g/cm^3 to 1,4 g/cm^3 at 20 °C.

3.3.3 Solubility (in water)

The solubility of the product in water is 40 g/l at 20°C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa[3]

The product boils at approximately 1700 °C.

3.3.6 Crystallisation point

The product melts at approximately 988 °C.

3.3.7 Specific heat

Not known.

3.3.8 Viscosity dynamic

Not applicable.

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1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

3) 100 kPa = 1 bar.

3.3.9 Critical temperature

Not applicable.

3.3.10 Critical pressure

Not applicable.

3.3.11 Physical hardness

Not applicable.

3.4 Chemical properties

Sodium fluoride releases hydrogen fluoride when in contact with acids.

4 Purity criteria

4.1 General

This European Standard specifies the minimum purity requirements for sodium fluoride 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.

NOTE Users of this product should check the national regulations in order to clarify whether it is of appropriate purity for treatment of water intended for human consumption, taking into account raw water quality, required dosage, contents of other impurities and additives used in the products not stated in this product standard.

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

4.2 Composition of commercial product

The content of sodium fluoride shall not be less than a mass fraction of 98 % (NaF).

The concentration of sodium fluoride shall be within ± 5 % of the manufacturer's declared value.

4.3 Impurities and main by-products

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

Table 1 — Impurities

Impurity	**Limit** in mass fraction in % of commercial product
Water- insoluble matter max.	0,5
Moisture max.	0,5