SLOVENSKI STANDARD
SIST EN 1208:1999

01-april-1999

Kemikalije, ki se uporabljajo za pripravo pitne vode – Natrijev kalcijev polifosfat

Chemicals used for treatment of water intended for human consumption - Sodium calcium polyphosphate

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natrium Calcium Polyphosphat

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

Ta slovenski standard je istoveten z: **EN 1208:1997**

ICS:

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

SIST EN 1208:1999 **en**

EUROPEAN STANDARD
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EN 1208

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ICS 71.100.80

Descriptors: potable water, water treatment, chemical compounds, polyphosphates, sodium phosphates, calcium phosphates, description, physical properties, chemical properties, impurities, toxic substances, tests, labelling, storage, information

English version

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This European Standard was approved by CEN on 26 September 1997.

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents

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of an identical text or by endorsement, at the latest by March 1998, and conflicting national standards shall be withdrawn at the latest by March 1998.

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.

Introduction

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

1) 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 ;

2) 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.

1 Scope

This European standard describes the characteristics and specifies the requirements and the corresponding test methods for sodium calcium polyphosphate used for treatment of water intended for human consumption. 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.

EN 26595	Water quality - Determination of total arsenic - Silver diethyldithiocarbamate spectrophotometric method (ISO 6595:1982)
EN ISO 3696	Water for analytical laboratory use - Specification and tests methods (ISO 3696 : 1987)
ISO 2997	Phosphoric acid for industrial use - Determination of sulphate content - Method by reduction and titrimetry.
ISO 3165	Sampling of chemical products for industrial use - Safety in sampling.
ISO 3357	Sodium tripolyphosphate and sodium pyrophosphate for industrial use. Determination of total phosphorus (V) oxide content - Quinoline phosphomolybdate gravimetric method
ISO 3360	Phosphoric acid and sodium phosphates for industrial use (including foodstuffs) - Determination of fluorine content - Alizarin complexone and lanthanum nitrate photometric method
ISO 5373	Condensed phosphates for industrial use (including foodstuffs) - Determination of calcium content - Flame atomic absorption spectrometric method
ISO 5666-1	Water quality - Determination of total mercury by flameless atomic absorption spectrometry - Part 1 : Method after digestion with permanganate-peroxodisulfate

ISO 5961	Water quality - Determination of cadmium by atomic absorption spectrometry
ISO 6206	Chemical products for industrial use - Sampling - Vocabulary
ISO 6703-1	Water quality - Determination of cyanide - Part 1 : Determination of total cyanide
ISO 8213	Chemical products for industrial use - Sampling techniques - Solid chemical products in the form of particles varying from powders to coarse lumps
ISO 8288	Water quality - Determination of cobalt, nickel, copper, zinc, cadmium and lead - Flame atomic absorption spectrometric methods
ISO 9174	Water quality - Determination of total chromium - Atomic absorption spectrometric methods
ISO 9965	Water quality - Determination of selenium - Atomic absorption spectrometric method (hydride technique)
ISO 11885	Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy

3 Description

3.1 Identification

3.1.1 Chemical name

Sodium calcium polyphosphate.

3.1.2 Synonym or common name

Sodium calcium polyphosphate, glassy.

3.1.3 Relative molecular mass

Various.

3.1.4 Empirical formula

$(NaPO_3)_n$. CaO, where *n* is typically 5.

3.1.5 Chemical formula

$(NaPO_3)_n$. CaO, where *n* is typically 5.

3.1.6 CAS Registry Number [1)]

65997-17-3

3.1.7 EINECS reference [2)]

233-782-9

3.2 Commercial form

Sodium calcium polyphosphate is available in a number of different forms (3.3.1).

3.3 Physical properties

3.3.1 Appearance

White glassy crystals, spheres.

3.3.2 Density

Solid : Not applicable.

3.3.3 Solubility in water

Approximately 0,005 g/l at 25 °C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100kPa [3)]

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

3.3.6 Melting point

As the product is a glass, an accurate melting point cannot be measured. By increasing the temperature higher than 900 °C, the product becomes less and less viscous.

3.3.7 Specific heat

Not known.

3.3.8 Viscocity (dynamic)

Solid : 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

Solutions of sodium calcium polyphosphate have neutral reactions.

The pH value of a solution containing 1 % (*m/m*) is approximately 5 to 7.

4 Purity criteria

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.

4.1 Composition of commercial product

The product shall conform to the following requirements on a dry mass basis :

- Phosphate content expressed as P_2O_5 : 61 % *(m/m)* to 69 % (*m/m*) ;

- Sodium content expressed as Na_2O : 20 % *(m/m)* to 30 % (*m/m*) ;