



SLOVENSKI STANDARD

SIST EN 1200:2005

01-julij-2005

Nadomešča:
SIST EN 1200:1999

Kemikalije, ki se uporabljajo za pripravo pitne vode – Trinatrijev fosfat

Chemicals used for treatment of water intended for human consumption - Trisodium orthophosphate

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch -
Trinatriumphosphat

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

Ta slovenski standard je istoveten z: EN 1200:2005

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
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EN 1200

March 2005

ICS 71.100.80

Supersedes EN 1200:1997

English version

Chemicals used for treatment of water intended for human consumption - Trisodium orthophosphate

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Trinatriumphosphat

This European Standard was approved by CEN on 3 February 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.

CEN members are the national standards bodies of 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.

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Foreword

This document (EN 1200:2005) 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 September 2005, and conflicting national standards shall be withdrawn at the latest by September 2005.

This document supersedes EN 1200:1997.

Significant technical differences between this edition and EN 1200:1997 are as follows:

- a) deletion of this reference to EU Directive 80/778/EEC of July, 15 1980 in order to take into account of the last Directive in force (see [1]);
- b) replacement of ISO 5666-1 by EN 1483 and of EN 26595 by EN ISO 11969;
- c) introduction of annex B as 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, 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.

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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 document:

- a) this document 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 document 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 document is subject to regulation or control by National Authorities.

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1 Scope

This document is applicable to trisodium orthophosphate used for treatment of water intended for human consumption. It describes the characteristics and specifies the requirements and the corresponding test methods for trisodium orthophosphate. It gives information on its use in water treatment. It also determines the rules relating to safe handling and use (see annex A).

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 1483, *Water quality – Determination of mercury*.

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

EN ISO 5961, *Water quality – Determination of cadmium by atomic absorption spectrometry (ISO 5961:1994)*.

EN ISO 11885, *Water quality – Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy (ISO 11885:1996)*.

EN ISO 11969, *Water quality – Determination of arsenic – Atomic absorption spectrometric method (hydride technique) (ISO 11969:1996)*.

ISO 2997, *Phosphoric acid for industrial use – Determination of sulfate content – Method by reduction and titrimetry*.

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

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ISO 3360, *Phosphoric acid and sodium phosphates for industrial use (including foodstuffs) – Determination of fluorine content – Alizarin complexone and lanthanum nitrate photometric method*.

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 chromium – Atomic absorption spectrometric methods*.

ISO 9965, *Water quality – Determination of selenium – Atomic absorption spectrometric method (hydride technique)*.

3 Description

3.1 Identification

3.1.1 Chemical name

Trisodium orthophosphate.

EN 1200:2005 (E)**3.1.2 Synonym or common name**

Sodium phosphate, tribasic.

3.1.3 Relative molecular mass

164,0.

3.1.4 Empirical formula

Na_3PO_4 .

3.1.5 Chemical formula

Na_3PO_4 .

3.1.6 CAS Registry Number¹⁾

7601-54-9.

3.1.7 EINECS reference²⁾

231-509-8.

3.2 Commercial forms

The trisodium orthophosphate is available in a number of different forms (see 3.3.1).

Different commercial forms, solids or dissolved in water are possible. All concentrations mentioned refer to the active matter and shall be calculated accordingly.

NOTE Trisodium orthophosphate can be a component of mixtures sold for water treatment purposes.

3.3 Physical properties**3.3.1 Appearance**

Solid : the product is a white powder or granules.

Liquid : the product is a clear solution.

3.3.2 Density

Solid : the bulk density of this product varies from 400 g/dm³ to 1 000 g/dm³.

Liquid : the density of solution is 1,047 g/ml for a product concentration of 50 g/l at 20 °C.

3.3.3 Solubility in water

The solubility in water is approximately 120 g/l at 25 °C.

1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa³⁾

Not applicable.

3.3.6 Melting point

For the solid product, 1 600 °C.

3.3.7 Specific heat

Not known.

3.3.8 Viscosity (dynamic)

For the solid product it is not applicable.

For the liquid the viscosity is equal to 5 mPa.s for a product concentration of 50 g/l.

3.3.9 Critical temperature

Not applicable.

3.3.10 Critical pressure

Not applicable.

3.3.11 Physical hardness

Not applicable.

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3.4 Chemical properties

The solutions of trisodium orthophosphate have alkaline reactions.

The pH value of a solution of a mass fraction of 1 % is approximately 12.

4 Purity criteria

4.1 General

This document specifies the minimum purity requirements for trisodium orthophosphate 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 document.

3) 100 kPa = 1 bar.