



NSAI
Standards

Irish Standard
I.S. EN 12678:2016

Chemical used for treatment of water
intended for human consumption -
Potassium peroxomonosulfate

I.S. EN 12678:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 12678:2016 is the adopted Irish version of the European Document EN 12678:2016, Chemical used for treatment of water intended for human consumption - Potassium peroxomonosulfate

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

EN 12678

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2016

ICS 71.100.80

Supersedes EN 12678:2008

English Version

Chemical used for treatment of water intended for human consumption - Potassium peroxomonosulfate

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Kaliumperoxomonosulfat

This European Standard was approved by CEN on 18 March 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Description	6
3.1 Identification	6
3.1.1 Chemical name	6
3.1.2 Synonym or common name	6
3.1.3 Relative molecular mass.....	6
3.1.4 Empirical formula of triple salt.....	6
3.1.5 CAS Registry Number.....	7
3.1.6 EINECS reference	7
3.2 Commercial form.....	7
3.3 Physical properties of triple salt	7
3.3.1 Appearance and odour.....	7
3.3.2 Density	7
3.3.3 Solubility in water.....	7
3.3.4 Vapour pressure	7
3.3.5 Boiling point at 100 kPa	7
3.3.6 Melting point.....	7
3.3.7 Specific heat	7
3.3.8 Viscosity (dynamic).....	7
3.3.9 Critical temperature	7
3.3.10 Critical pressure	8
3.3.11 Physical hardness	8
3.4 Chemical properties.....	8
4 Purity criteria	8
4.1 General.....	8
4.2 Composition of commercial product.....	8
4.3 Impurities and main by-products	8
4.4 Chemical parameters.....	8
5 Test methods	9
5.1 Sampling.....	9
5.2 Analysis.....	9
5.2.1 Determination of potassium peroxomonosulfate (KHSO_5) (active ingredient).....	9
5.2.2 Chemical parameters.....	12
6 Labelling - Transportation - Storage	14
6.1 Means of delivery	14
6.2 Labelling according to the EU Legislation	15
6.3 Transportation regulations and labelling.....	15
6.4 Marking.....	15
6.5 Storage	15
6.5.1 Generals.....	15
6.5.2 Long term stability.....	15

6.5.3 Storage incompatibilities.....	16
Annex A (informative) General information on potassium peroxomonosulfate	17
A.1 Origin	17
A.1.1 Raw materials	17
A.1.2 Manufacturing process	17
A.2 Use.....	17
A.2.1 Function	17
A.2.2 Form in which it is used.....	17
A.2.3 Treatment dose	17
A.2.4 Means of application.....	17
A.2.5 Secondary effects	17
A.2.6 Removal of excess product.....	18
Annex B (normative) General rules relating to safety.....	19
B.1 Rules for safe handling and use.....	19
B.2 Emergency procedures.....	19
B.2.1 First aid	19
B.2.2 Spillage	19
B.2.3 Fire	19
Annex C (normative) Determination of arsenic, antimony and selenium (atomic absorption spectrometry hydride technique)	20
C.1 Safety precautions.....	20
C.2 General principle	20
C.3 Interferences.....	20
C.4 Reagents.....	20
C.5 Apparatus	22
C.6 Procedure	24
C.6.1 Preparation of the apparatus.....	24
C.6.2 Preparation of calibration solutions	24
C.6.3 Preparation of test solutions and standard solutions.....	24
C.6.4 Determination of arsenic with sodium borohydride.....	24
C.6.5 Determination of selenium with sodium borohydride.....	25
C.6.6 Determination of antimony with sodium borohydride	25
C.7 Calculation.....	25
Bibliography	26

EN 12678:2016 (E)

European foreword

This document (EN 12678:2016) 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 November 2016, and conflicting national standards shall be withdrawn at the latest by November 2016.

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 12678:2008.

Significant technical difference between this edition and EN 12678:2008 is as follows:

- deletion of reference to EU Directive 67/548/EEC of June 27, 1967 in order to take into account the latest Regulation in force (see [3]).

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.

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 1 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.

NOTE 2 This product is a biocide and needs to comply with the relevant legislation in force. In the European Union, at the time of publication, this legislation is REGULATION (EU) No 528/2012 [1]).

EN 12678:2016 (E)

1 Scope

This European Standard is applicable to potassium peroxomonosulfate used for treatment of water intended for human consumption. It describes the characteristics of potassium peroxomonosulfate and specifies the requirements and the corresponding test methods for potassium peroxomonosulfate. 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 1233, *Water quality — Determination of chromium — Atomic absorption spectrometric methods*

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

EN ISO 12846, *Water quality — Determination of mercury — Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846)*

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

ISO 6206, *Chemical products for industrial use — Sampling — Vocabulary*

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*

3 Description

3.1 Identification

3.1.1 Chemical name

Potassium peroxomonosulfate triple salt.

3.1.2 Synonym or common name

Potassium peroxomonosulfate, Potassium monopersulfate, Potassium hydrogenperoxomonosulfate, Pentapotassium-bis(peroxomonosulfate)bis(sulfate).

3.1.3 Relative molecular mass

Triple salt: 614,76.

(Active ingredient KHSO_5 : 152,17).

3.1.4 Empirical formula of triple salt

$\text{K}_5\text{H}_3\text{S}_4\text{O}_{18}$ (2 KHSO_5 , KHSO_4 , K_2SO_4).

Active ingredient KHSO_5 .

3.1.5 CAS Registry Number¹⁾

70693-62-8.

3.1.6 EINECS reference²⁾

274-778-7.

3.2 Commercial form

Potassium peroxomonosulfate as commercial product exists as a triple salt comprising potassium peroxomonosulfate (2KHSO_5) potassium hydrogen sulfate (KHSO_4) and potassium sulfate (K_2SO_4).

3.3 Physical properties of triple salt

3.3.1 Appearance and odour

The product is white, odourless, granular, free-flowing salt.

3.3.2 Density

The bulk density of the product is approximately between 1 g/cm^3 and $1,2 \text{ g/cm}^3$.

3.3.3 Solubility in water

The solubility of the product is:

- approximately 250 g/l at 20 °C;
- approximately 300 g/l at 50 °C;
- approximately 330 g/l at 70 °C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa³⁾

Not applicable.

3.3.6 Melting point

The product decomposes above 60 °C.

3.3.7 Specific heat

Not applicable.

3.3.8 Viscosity (dynamic)

Not applicable.

3.3.9 Critical temperature

Not applicable.

1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

3) 100 kPa = 1 bar

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