SLOVENSKI STANDARD
SIST EN 15797:2022

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Nadomešča:
SIST EN 15797:2010

Kemikalije, ki se uporabljajo za pripravo bazenske vode - Strjevanje na osnovi železa

Chemicals used for the treatment of swimming pool water - Iron based coagulants

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Flockungsmittel auf Eisenbasis

Produits chimiques utilisés pour le traitement de l'eau des piscines - Coagulants à base de fer

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ICS:

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71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

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EUROPEAN STANDARD

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English Version

Chemicals used for the treatment of swimming pool water - Iron based coagulants

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Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Flockungsmittel auf Eisenbasis

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 15797:2022) 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of an identical text or by endorsement, at the latest by December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15797:2010.

In comparison with the previous edition, the following technical modifications have been made:

a) modification of 7.3 on transportation regulations and labelling, adding the sentence “The user shall be aware of the incompatibilities between transported products.”;

b) modification of 7.4 on marking. The requirements of marking are also applied to the accompanying documents;

c) update of bibliography;

d) update of 7.2 according to EN 888, EN 890 and EN 891;

e) update of Clause 6.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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 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.

1 Scope

This document is applicable to iron based coagulants (iron (III) chloride, iron (III) chloride sulfate and iron (III) sulfate liquid) used directly or for the production of formulations for treatment of water for swimming pools.

It describes the characteristics of iron based coagulants and specifies the requirements and the corresponding test methods for iron based coagulants. It gives information on their use in swimming pool water treatment. General information on iron based coagulants is given in Annex A.

It also determines the rules relating to safe handling and use (see Annex B).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 888, *Chemicals used for treatment of water intended for human consumption - Iron (III) chloride*

EN 890, *Chemicals used for treatment of water intended for human consumption - Iron (III) sulfate solution*

EN 891, *Chemicals used for treatment of water intended for human consumption - Iron (III) chloride sulfate*

EN 17215, *Chemicals used for treatment of water intended for human consumption - Iron-based coagulants - Analytical methods*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/ui

— IEC Electropedia: available at https://www.electropedia.org/

4 Description

For the identification, the commercial form, the physical properties and the chemical properties see the relevant subclauses of EN 888, EN 890 and EN 891.

5 Purity criteria

5.1 General

This document specifies the minimum purity requirements for iron based coagulants used for the treatment of swimming pool water. Limits are given for impurities commonly present in the product. Depending on the raw material and the manufacturing process, other impurities can be present and, if so, this shall be notified to the user and when necessary to relevant authorities.

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

Limits have been given for impurities and chemicals 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 lead to significant quantities of impurities, by-products or additives being present, this shall be notified to the user.

5.2 Composition of commercial product

The concentration of active matter in the product expressed as mass fraction in % of FeCl3, $Fe_2 (SO_4)_3$ or $FeClSO_4$ shall be within ± 3 % of the manufacturer's declared values.

NOTE The concentration of iron active matter in commercial products varies. Typical values are given in Table 1.

Table 1 — Typical values for the concentration of iron active matter in commercial products

Product	Commercial form	Concentration Mass fraction in %
Iron (III) chloride	Solid	99 in $FeCl_3$
	Solid hexahydrate	59 in $FeCl_3$
	Solution	40 in $FeCl_3$
Iron (III) sulfate	Solution	30 in $Fe_2 (SO_4)_3$
Iron (III) chloride sulfate	Solution	36,9 in $FeClSO_4$

5.3 Impurities and main by-products

The content of manganese, iron (II) and insoluble matters shall conform to the requirements specified in EN 888, EN 890 and EN 891.

5.4 Chemical parameters

The content of arsenic, cadmium, chromium, mercury, nickel, lead, antimony and selenium for each grade and type of products shall conform to the requirements specified in EN 888, EN 890 and EN 891.

6 Test methods

The methods for sampling and analysis are specified in EN 17215.

7 Labelling - Transportation - Storage

7.1 Means of delivery

Solids: the products shall be delivered in suitable packages, paper or plastics bags.

Liquids: the products shall be delivered in containers of corrosion-resistant materials suitable for the purpose.

NOTE The manufacturer can provide advice on suitable materials.

In order that the purity of the products is not affected, the means of delivery shall not have been used previously for any different product or it shall have been specially cleaned and prepared before use.

7.2 Labelling according to the EU legislation[1]

— **For Iron (III) chloride:** The following is an example of labelling. The manufacturer should confirm the classifications for their product. Users are instructed to read the manufactures data sheet. No example is given for the ferric chloride anhydrous.

Solids	
Hazard pictogram  **Figure 1 — GHS05**  **Figure 2 — GHS07**	— Signal word: Danger — Hazard statements: H302: Harmful if swallowed. H315: Causes skin irritation. H318: Causes serious eye damage. H317: May cause an allergic skin reaction. Precautionary statements ('P statements') should be provided by the company being responsible for the marketing of the substance. They should be indicated on the packaging label and in the extended safety data sheet (eSDS) of the substance.

[1] See [1].

Solutions	
Hazard pictogram  **Figure 3 — GHS05**  **Figure 4 — GHS07**	— Signal word: Danger — Hazard statements: H290: May be corrosive to metals. H302: Harmful if swallowed. H315: Causes skin irritation. H318: Causes serious eye damage. H317: May cause an allergic skin reaction. NOTE H317 depends on Ni content. Precautionary statements ('P statements') should be provided by the company being responsible for the marketing of the substance. They should be indicated on the packaging label and in the extended safety data sheet (eSDS) of the substance.