

SLOVENSKI STANDARD

SIST EN 15796:2022

01-julij-2022

Nadomešča:
SIST EN 15796:2010

Kemikalije, ki se uporabljajo za pripravo bazenske vode - Kalcijev hipoklorit

Chemicals used for treatment of swimming pool water - Calcium hypochlorite

Produkte zur Aufbereitung von Schwimm-und Badebeckenwasser - Calciumhypochlorit

Produits chimiques utilisés pour le traitement de l'eau des piscines - Hypochlorite de calcium

Ta slovenski standard je istoveten z: EN 15796:2022

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13.060.25	Voda za industrijsko uporabo	Water for industrial use
71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

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EUROPEAN STANDARD
NORME EUROPÉENNE
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ICS 71.100.80

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English Version

**Chemicals used for treatment of swimming pool water -
Calcium hypochlorite**

Produits chimiques utilisés pour le traitement de l'eau
des piscines - Hypochlorite de calcium

Produkte zur Aufbereitung von Schwimm-und
Badebeckenwasser - Calciumhypochlorit

This European Standard was approved by CEN on 20 April 2022.

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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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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 15796:2022) 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of an identical text or by endorsement, at the latest by December 2022, and conflicting national standards shall be withdrawn at the latest by December 2022.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 15796:2010.

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 must 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 7.2 on labelling.

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 for swimming pools, caused by the product covered by this document:

- d) 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;
- e) 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 calcium hypochlorite used directly, or for the production of formulations, for treatment of water for swimming pools. It describes the characteristics of calcium hypochlorite and specifies the requirements and the corresponding test methods for calcium hypochlorite. It gives information on its use in swimming pool water treatment. It also determines the rules relating to safe handling and use of calcium hypochlorite (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 900, *Chemicals used for treatment of water intended for human consumption - Calcium hypochlorite*

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>
- 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 900.

For additional information on calcium hypochlorite, see Annex A.

5 Purity criteria

5.1 General

This document specifies the minimum purity requirements for calcium hypochlorite used for the treatment of water for swimming pools. 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 The national regulations allow users to clarify whether the product is of appropriate purity for the treatment of water for swimming pools, taking into account water quality, required dosage, contents of other impurities and additives used in the product and 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 lead to significant quantities of other impurities, by-products or additives being present, this shall be notified to the user.

5.2 Composition of commercial product

Calcium hypochlorite is available in powder, granular or tablet form with a minimum concentration of mass fraction 65,5 % calcium hypochlorite ($\text{Ca}(\text{ClO})_2$) (equivalent to an available active chlorine content in mass fraction of at least 65 %) at the time of delivery by the producer. The concentration of calcium hypochlorite shall be equal to or greater than the value specified by the manufacturer.

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Dissolution quality, calculated as available chlorine which is obtainable within 1 min after dissolution in water, shall not be less than a mass fraction of 45,5 %.

5.3 Impurities and main by-products

The content of impurities and water-insoluble matter shall conform to the requirements specified in EN 900.

5.4 Chemical parameters

The contents of arsenic, cadmium, chromium, mercury, nickel, lead, antimony, selenium and bromate for each type of product shall conform to the requirements specified in EN 900.

6 Test methods

The methods for sampling and analysis are those specified in EN 900.

7 Labelling - Transportation - Storage

7.1 Means of delivery

Calcium hypochlorite shall be delivered in plastics-coated steel drums or polyethylene bottles.

In order that the purity of the product 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 Risk and safety labelling according to the EU Directives [1]

The following labelling requirements shall apply to calcium hypochlorite based coagulants at the date of publication of this document:

Hazard pictogram



Signal word:

Danger

– Hazard statement:

H 272: May intensify fire, oxidizer

H 302: Harmful if swallowed

H 314: causes severe skin burns and eye damage

H 400: Very toxic to aquatic life

EUH031: Contact with acids liberates toxic gas

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.

Figure 1 — GHS 03



Figure 2 — GHS 05



Figure 3 — GHS 07

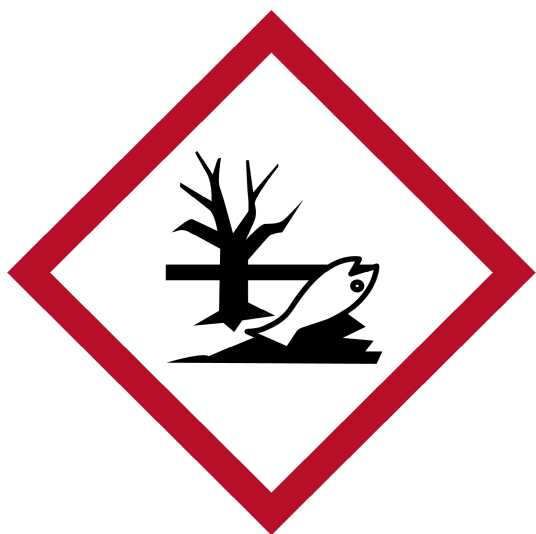


Figure 4 — GHS 09

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The regulation [1], and its amendments for the purposes of its adaptation to technical and scientific progress, contains a list of substances classified by the EU. Substances not listed in this regulation can be classified on the basis of their intrinsic properties according to the criteria in the regulation by the person responsible for the marketing of the substance.

The supplier provides a safety data sheet in the national language in accordance with Regulation (EC) No 1907/2006, Annex II.

7.3 Transportation regulations and labelling

The following classification requirements shall apply to calcium hypochlorite dry at the date of the publication of this document.

Calcium hypochlorite is listed as UN Number¹:

- 1748 for granular, calcium hypochlorite mixture, dry;
- 1748 for tablets, calcium hypochlorite mixture, dry;

(The above products contain more than 39 % mass fraction available chlorine.)

- 2880 for granular, calcium hypochlorite, hydrated or calcium hypochlorite, hydrated mixture;
- 2880 for tablets, calcium hypochlorite, hydrated or calcium hypochlorite, hydrated mixture.

(The above products contain a minimum of 5,5 % mass fraction water but not more than 16 % mass fraction water.)

RID² ADR³: class 5.1, classification code O₂; packing group II (powder and granular) and packing group III (tablets).

IMDG⁴: class 5.1.

IATA⁵: class 5.1. <https://standards.iteh.ai/catalog/standards/sist/1ba64db7-2670-4bec-925e-6a6-50668778/sist-en-15796-2022>

The user shall be aware of the incompatibilities between transported products.

7.4 Marking

The marking and the accompanying documents shall include the following:

- the name “calcium hypochlorite”, trade name, grade and type;
- the net mass;
- the name and address of supplier and/or manufacturer;
- the statement “This product conforms to EN 15796”.

¹ United Nations Number.

² Regulations concerning International carriage of Dangerous goods by rail.

³ European Agreement concerning the international carriage of Dangerous goods by Road.

⁴ International Maritime transport of Dangerous Goods.

⁵ International Air Transport Association.