SLOVENSKI STANDARD
oSIST prEN 15075:2020

01-september-2020

Kemikalije, ki se uporabljajo za pripravo bazenske vode - Natrijev hidrogen karbonat

Chemicals used for treatment of swimming pool water - Sodium hydrogen carbonate

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Natriumhydrogencarbonat

Produits chimiques utilisés pour le traitement de l'eau des piscines - Hydrogénocarbonate de sodium

Ta slovenski standard je istoveten z: **prEN 15075**

ICS:

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

oSIST prEN 15075:2020 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 15075

June 2020

ICS 71.100.80

Will supersede EN 15075:2013

English Version

Chemicals used for treatment of swimming pool water - Sodium hydrogen carbonate

Produits chimiques utilisés pour le traitement de l'eau des piscines - Hydrogénocarbonate de sodium

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Natriumhydrogencarbonat

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 164.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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Ref. No. prEN 15075:2020 E

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European foreword

This document (prEN 15075:2020) has been prepared by Technical Committee CEN/TC 164 “Water supply”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15075:2013.

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 A.2.1.

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 sodium hydrogen carbonate used directly or used to prepare commercial formulations for treating swimming pool water. It describes the characteristics of sodium hydrogen carbonate and specifies the requirements and the corresponding test methods for sodium hydrogen carbonate. It gives information on its use in treating swimming pool water.

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 898, *Chemicals used for treatment of water intended for human consumption — Sodium hydrogen carbonate*

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 http://www.electropedia.org/

4 Description

4.1 Identification

4.1.1 Chemical name

Sodium hydrogen carbonate.

4.1.2 Synonym or commons name

Sodium bicarbonate, bicarbonate of soda, baking soda.

4.1.3 Relative molecular mass

84,01.

4.1.4 Empirical formula

$NaHCO_3$.

4.1.5 Chemical formula

$NaHCO_3$.

4.1.6 CAS-Registry Number [1]

144-55-8.

[1] Chemical Abstracts Service Registry Number.

4.1.7 EINECS reference [2]

205-633-8.

4.2 Commercial form

The product is available as powder or crystals.

4.3 Physical properties

4.3.1 Appearance

The product is a white powder or crystals, slightly hygroscopic.

4.3.2 Density

The density of this product is 2,2 g/cm^3.

The bulk density is ranging from 0,5 kg/dm^3 to 1,1 kg/dm^3.

4.3.3 Solubility in water

The product is soluble at 95 g/l at 20 °C.

4.3.4 Vapour pressure

Not applicable.

4.3.5 Boiling point at 100 kPa

Not applicable.

NOTE 100 kPa = 1 bar.

4.3.6 Melting point

Not applicable. The product decomposes at 50 °C.

4.3.7 Specific heat

1,197 J/(kG K).

4.3.8 Viscosity (dynamic)

Not applicable.

4.3.9 Critical temperature

Not applicable.

4.3.10 Critical pressure

Not applicable.

4.3.11 Physical hardness

The hardness of solid sodium hydrogen carbonate is given as 1,5 to 2 on the Moh' scale of hardness.

4.4 Chemical properties

Sodium hydrogen carbonate as specified is technical water-free $NaHCO_3$.

[2] European Inventory of Existing Commercial Chemical Substances.

Sodium hydrogen carbonate reacts exothermically with acids and leads to the formation of carbon dioxide.

For additional information on sodium hydrogen carbonate, see Annex A.

5 Purity criteria

5.1 General

This document specifies the minimum purity requirements for sodium hydrogen carbonate used for treating 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 can be present and, if so, the user, and when necessary the relevant authorities, shall be notified.

Users of this product should check the national regulations in order to clarify whether it is of appropriate purity for treatment of water for swimming pools, taking into account raw water quality, required dosage, contents of other impurities and additives used in the products 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 impurities, by-products or additives being present, the user shall be notified.

5.2 Composition of commercial product

The product shall contain not less than a mass fraction of 98,5 % of $NaHCO_3$.

5.3 Impurities and main by-products

The product shall conform to the requirements specified in Table 1.

The concentration limits refer to pure $NaHCO_3$.

Table 1 — Impurities

Impurity		Limit in mg/kg of $NaHCO_3$
Iron(II)[a]	max.	5
Insoluble matters[b]	max.	200

[a] Iron(II) can cause organoleptic problems.

[b] Indicates the presence of foreign matter.

5.4 Chemical parameters

The product shall conform to the requirements specified in Table 2.

Table 2 — Chemical parameters

Parameter		Limit mg/kg of $NaHCO_3$
Arsenic (As)	max.	2
Cadmium (Cd)	max.	2
Chromium (Cr)	max.	2
Mercury (Hg)	max.	0,1
Nickel (Ni)	max.	2
Lead (Pb)	max.	2
NOTE Antimony, selenium, cyanides, pesticides and polycyclic aromatic hydrocarbons are not relevant in sodium hydrogen carbonate. For parametric values of sodium hydrogen carbonate on trace metal content in drinking water, see [1].		

6 Test methods

The sampling and the analytical methods shall be those described in EN 898.

7 Labelling - Transportation - Storage

7.1 Means of delivery

Sodium hydrogen carbonate can be delivered in bulk, bulk bags or in bags.

To ensure the purity of the product, the means of delivery shall not have been previously used for any different product or it shall have been specially cleaned and prepared before use.

7.2 Labelling according to the EU legislation [3]

Sodium hydrogen carbonate is not subject to labelling regulations at the publication date of this document.

The regulation [2], and its amendments for the purposes of its adaptation to technical and scientific progress, contain a list of substances classified by the EU. Substances not listed in this regulation should 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.

7.3 Transportation regulations and labelling

Sodium hydrogen carbonate is not listed under a UN number [4]. Sodium hydrogen carbonate is not classified as a dangerous product for road, rail, sea and air transportation. The user shall be aware of the incompatibilities between transported products.

[3] See [2].
[4] United Nations number.