

SVENSK STANDARD

SS-EN 15076:2013



Fastställt/Approved: 2013-05-26
Publicerad/Published: 2013-05-27
Utgåva/Edition: 2
Språk/Language: engelska/English
ICS: 71.100.80

Kemikalier för behandling av vatten för simbassänger – Natriumhydroxid

Chemicals used for treatment of swimming pool water – Sodium hydroxide

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Denna standard ersätter SS-EN 15076:2006, utgåva 1.

The European Standard EN 15076:2013 has the status of a Swedish Standard. This document contains the official version of EN 15076:2013.

This standard supersedes the Swedish Standard SS-EN 15076:2006, edition 1.

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Denna standard är framtagen av kommittén för Vattenreningskemikalier och industrikalk, SIS/TK 431.

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EUROPEAN STANDARD

EN 15076

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2013

ICS 71.100.80

Supersedes EN 15076:2006

English Version

Chemicals used for treatment of swimming pool water - Sodium hydroxide

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

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Natriumhydroxid

This European Standard was approved by CEN on 21 March 2013.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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Contents	Page
Foreword.....	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Description	5
3.1 Identification.....	5
3.2 Commercial forms.....	6
3.3 Physical properties	6
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	9
4.4 Chemical parameters	9
5 Test methods.....	9
6 Labelling – Transportation – Storage.....	10
6.1 Means of delivery	10
6.2 Labelling according to EU legislation	10
6.3 Transportation regulations and labelling.....	11
6.4 Marking	11
6.5 Storage	11
Annex A (informative) General information on sodium hydroxide	12
A.1 Origin.....	12
A.2 Use.....	12
Annex B (normative) General rules relating to safety	13
B.1 Rules for safe handling and use.....	13
B.2 Emergency procedures.....	13
Bibliography.....	14

Foreword

This document (EN 15076:2013) 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 2013, and conflicting national standards shall be withdrawn at the latest by November 2013.

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 15076:2006.

Significant technical differences between this edition and EN 15076:2006 are as follows:

- Replacement of warning and safety precautions notes by labelling according to Regulation (EC) No 1272/2008 [3].

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, 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.

SS-EN 15076:2013 (E)

Introduction

In respect of potential adverse effects on the quality of water intended for swimming pools 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 Directive 1998/8/EC [1].

1 Scope

This European Standard is applicable to sodium hydroxide solution used directly or for the production of formulations for treating swimming pool water. It describes the characteristics and specifies the requirements and the corresponding test methods for sodium hydroxide. It gives information on its use for treating swimming pool water and determines the rules relating to safe handling and use (see Annex B).

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 896, *Chemicals used for treatment of water intended for human consumption — Sodium hydroxide*

3 Description

3.1 Identification

3.1.1 Chemical name

Sodium hydroxide.

3.1.2 Synonym or common name

Caustic soda.

3.1.3 Relative molecular mass

40,0.

3.1.4 Empirical formula

NaOH.

3.1.5 Chemical formula

NaOH.

3.1.6 CAS Registry Number ¹⁾

1310-73-2.

3.1.7 EINECS reference ²⁾

215-185-5.

1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

SS-EN 15076:2013 (E)

3.2 Commercial forms

The product is available as flakes, pearls, solid, or as an aqueous solution of different concentrations.

3.3 Physical properties

3.3.1 Appearance

Solid: the product is white, deliquescent.

Liquid: the product is a clear solution, slightly turbid colourless solution, slightly viscous.

3.3.2 Density

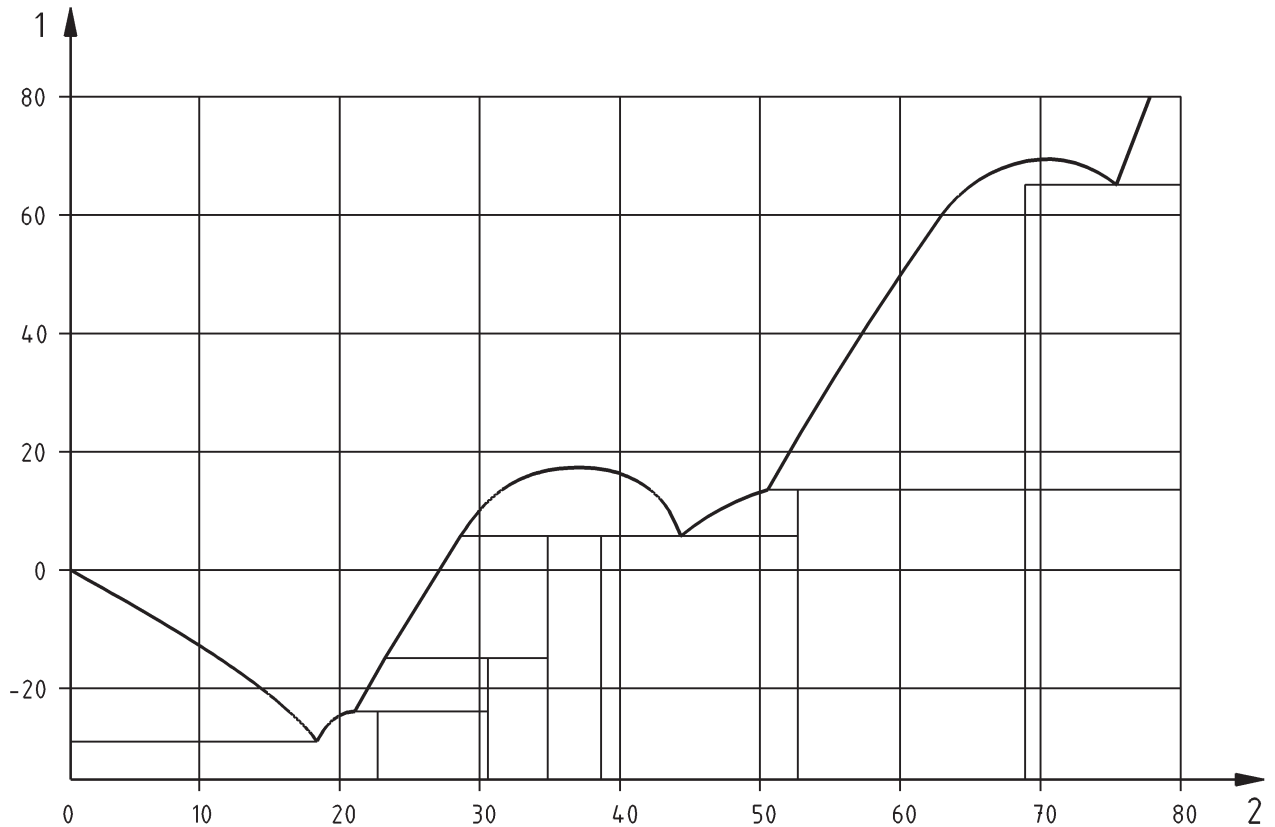
Solid: the density of this product is 2,1 g/cm³.

The bulk density of pearls is 1,2 kg/dm³.

Liquid: the density of solution is 1,52 g/ml for a product concentration of mass fraction of 50 % at 20 °C.

3.3.3 Solubility in water

The product is highly soluble at all temperatures above 20 °C (partial crystallisation occurs above concentration of mass fraction of 55 % (see Figure 1)).



Key

- 1 temperature in ° C.
- 2 NaOH concentration in mass fraction in %

Figure 1 — Solubility of sodium hydroxide

3.3.4 Vapour pressure

Solution of concentration of mass fraction of 50 %:

- 120 Pa at 20 °C;
- 450 Pa at 40 °C;
- 5 000 Pa at 80 °C.

3.3.5 Boiling point at 100 kPa ³⁾

145 °C for a solution of concentration of mass fraction of 50 %.

3.3.6 Crystallisation point

+ 12 °C for a solution of concentration of mass fraction of 50 % (see Figure 1).

3) 100 kPa = 1 bar.