

# SVENSK STANDARD

## SS-EN 882:2016



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### **Processkemikalier för beredning av dricksvatten – Natriumaluminat**

**Chemicals used for treatment of water intended for human  
consumption – Sodium aluminate**

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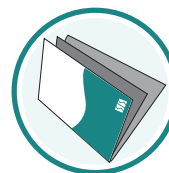
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Denna standard ersätter SS-EN 882:2004, utgåva 2.

The European Standard EN 882:2016 has the status of a Swedish Standard. This document contains the official English version of EN 882:2016.

This standard supersedes the Swedish Standard SS-EN 882:2004, edition 2.

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EUROPEAN STANDARD

**EN 882**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2016

ICS 71.100.80

Supersedes EN 882:2004

English Version

## Chemicals used for treatment of water intended for human consumption - Sodium aluminate

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natriumaluminat

This European Standard was approved by CEN on 18 January 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.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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## European foreword

This document (EN 882:2016) 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of an identical text or by endorsement, at the latest by September 2016, and conflicting national standards shall be withdrawn at the latest by September 2016.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 882:2004.

Significant technical differences between this edition and EN 882:2004 are as follows:

- a) addition of chemical names for aluminium sodium dioxide and for aluminium sodium tetrahydroxide;
- b) replacement of warning and safety precautions notes by labelling according to Regulation (EC) No 1272/2008.

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 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 aluminate used for treatment of water intended for human consumption. It describes the characteristics and specifies the requirements of sodium aluminate and refers to the corresponding analytical methods. It gives information for its use in water treatment. It also determines the rules relating to safe handling and use of sodium aluminate (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 1302, *Chemicals used for treatment of water intended for human consumption - Aluminium-based coagulants - Analytical methods*

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*

## 3 Description

### 3.1 Identification

#### 3.1.1 Chemical name

Aluminium sodium oxide

Aluminium sodium dioxide

Aluminium sodium tetrahydroxide

#### 3.1.2 Synonym or common name

Sodium aluminate

#### 3.1.3 Relative molecular mass

82 for  $\text{NaAlO}_2$ .

#### 3.1.4 Empirical formula

$\text{NaAlO}_2$  0,1  $\text{Na}_2\text{O} \cdot n\text{H}_2\text{O}$  ( $n$  varies from 0,3 to 0,4)

#### 3.1.5 Chemical formula

$\text{NaAlO}_2$

### 3.1.6 CAS Registry Number <sup>1)</sup>

1302-42-7

12251-53-5

### 3.1.7 EINECS reference <sup>2)</sup>

215-100-1

235-487-0

## 3.2 Commercial form

Sodium aluminate is available as solids (powder or granules) or solutions.

## 3.3 Physical properties

### 3.3.1 Appearance

The product is a white powder or granules or colourless to yellow liquid.

### 3.3.2 Density

The absolute density of solids products is 2,35 g/cm<sup>3</sup>.

The tamped bulk density (powder) is between 1 g/cm<sup>3</sup> to 1,2 g/cm<sup>3</sup> (depends on grain size).

The density of solutions is 1,5 g/ml for a solution containing 10 % of active matter, expressed as mass fraction of aluminium in the product (10 % Al).

### 3.3.3 Solubility

Sodium aluminate is soluble in water to yield solutions of up to 12,7 % Al at 20 °C (concentration higher than 400 g/l).

NOTE Depending on temperature and degree of dilution, solutions of sodium aluminate can hydrolyse and form a precipitate.

### 3.3.4 Vapour pressure

— Solid not applicable

— Solution not known

### 3.3.5 Boiling point at 100 kPa <sup>3)</sup>

— Solid not applicable

— Solution not known

### 3.3.6 Melting or crystallization point

— Solid melting point: approximately 1 650 °C

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<sup>1)</sup> Chemical Abstracts Service Registry Number.

<sup>2)</sup> European inventory of Existing Commercial chemicals Substances.

<sup>3)</sup> 100 kPa = 1 bar