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STANDARDS  
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**SVENSK STANDARD**  
**SS-EN 882:2004**

Fastställd 2004-12-17

Utgåva 2

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

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

ICS 13.060.20; 71.100.80

Språk: engelska

Publicerad: februari 2005

Europastandarden EN 882:2004 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 882:2004.

Denna standard ersätter SS-EN 882, utgåva 1.

I enlighet med Statens livsmedelsverks föreskrifter om dricksvatten, SLV FS 2001:30, är natriumaluminat tillåtet som processkemikalie för beredning av dricksvatten i Sverige.

The European Standard EN 882:2004 has the status of a Swedish Standard. This document contains the official English version of EN 882:2004.

This standard supersedes the Swedish Standard SS-EN 882, edition 1.

According to The National Food Administration's Ordinance with regulations and general advice on drinking water, SLV FS 2001:30, sodium aluminate is permitted in Sweden as a process chemical for treatment of water intended for human consumption.

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EUROPEAN STANDARD

**EN 882**

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2004

ICS 71.100.80

Supersedes EN 882:1997

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 - Aluminat de sodium

Produkte zur Aufbereitung von Wasser für menschlichen Gebrauch - Natriumaluminat

This European Standard was approved by CEN on 30 September 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This document (EN 882:2004) 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 May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

This document supersedes EN 882:1997.

Significant technical differences between this edition and EN 882:1997 are as follows:

- a) replacement of the reference to EU Directive 80/778 of 15 July 1980 with the latest Directive in force (see[1]);
- b) introduction of an annex B (normative) giving general rules relating to safety;
- c) expansion of Annex A by addition of A.2 "Quality of commercial product".

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## EN 882:2004 (E)

### 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 referenced documents are indispensable for the application 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 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

#### 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

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

#### 3.1.5 Chemical formula

$\text{NaAlO}_2$

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

11138-49-1

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

234-391-6

## 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

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1) Chemical Abstracts Service Registry Number.

2) European inventory of Existing Commercial chemicals Substances.