

**SLOVENSKI STANDARD  
SIST EN 886:2005****01-marec-2005****Nadomešča:  
SIST EN 886:2002**

---

**Kemikalije, ki se uporabljajo za pripravo pitne vode – Polialuminijev hidroksid silikat sulfat**

Chemicals used for treatment of water intended for human consumption - Polyaluminium hydroxide silicate sulfat

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Polyaluminiumhydroxidsilikatsulfat

Produits chimiques utilisés pour le traitement de l'eau destinée a la consommation humaine - Polyhydroxysulfatesilicate d'aluminium

**Ta slovenski standard je istoveten z: EN 886:2004****ICS:**

13.060.20	Pitna voda	Drinking water
71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

**SIST EN 886:2005** **en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 886:2005

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 886**

November 2004

ICS 71.100.80

Supersedes EN 886:2001

English version

## Chemicals used for treatment of water intended for human consumption - Polyaluminium hydroxide silicate sulfate

Produits chimiques utilisés pour le traitement de l'eau destinée à la consommation humaine - Polyhydroxysulfatesilicate d'aluminium

Produkte zur Aufbereitung von Wasser für den Menschlichen Gebrauch - Polyaluminiumhydroxidsilikatsulfat

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.

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

## Contents

	Page
Foreword.....	3
Introduction.....	4
1 Scope.....	5
2 Normative references.....	5
3 Description.....	5
4 Purity criteria.....	8
5 Test methods.....	9
6 Labelling - Transportation - Storage.....	10
Annex A (informative) General information on polyaluminium hydroxide silicate sulfate.....	12
Annex B (normative) General rules relating to safety.....	15
Bibliography.....	16

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

## Foreword

This document (EN 886:2004) 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 886:2001.

Significant technical differences between this edition and EN 886:2001 are as follows:

- a) replacement of the reference to EU Directive 80/778 of July, 15 1980 with the latest Directive in force (see[1]);
- b) 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.

**(standards.iteh.ai)**

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

## Introduction

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this document:

- 1) 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;
- 2) 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.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

## 1 Scope

This document is applicable to polyaluminium hydroxide silicate sulfate used for treatment of water intended for human consumption. It describes the characteristics of polyaluminium hydroxide silicate sulfate and specifies the requirements for polyaluminium hydroxide silicate sulfate and refers to the corresponding analytical methods. It gives information on its use in water treatment. It also determines the rules to safe handling and use of polyaluminium hydroxide silicate sulfate (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*.

## 3 Description

**iTeh STANDARD PREVIEW**  
(standards.iteh.ai)

### 3.1 Identification

#### 3.1.1 Chemical name

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)  
<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

Polyaluminium hydroxide silicate sulfate.

#### 3.1.2 Synonym or common names

Polyaluminium silicate sulfate, PASS.

#### 3.1.3 Relative molecular mass

Variable (see 3.1.4).

#### 3.1.4 Empirical formula

Polyaluminium hydroxide silicate sulfate is a synthetically manufactured polymerized basified aluminium salt containing silicate. The structure of the product is polymeric.

$\text{Al}(\text{OH})_a(\text{SO}_4)_b(\text{SiOx})_c$  with  $a + 2b + 2c(x - 2) = 3$

and  $a = 1,05$  to  $2,0$

$b = 0,30$  to  $1,12$

$c = 0,005$  to  $0,10$

$x = 2,0$  to  $4,0$

#### 3.1.5 Chemical formula

Variable (see 3.1.4).

**EN 886:2004 (E)****3.1.6 CAS Registry Number<sup>1)</sup>**

(Aluminium hydroxide silicate sulfate): 131148-05-5.

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

The following is a list of EINECS reference numbers for products or their starting materials.

Basic aluminium sulfate, PAS 259-881-7

Aluminosilicate 215-475-1

Sodium sulfate 231-820-9

**3.2 Commercial form**

The product is available as a liquid.

**3.3 Physical properties****3.3.1 Appearance**

Polyaluminium hydroxide silicate sulfate is a colourless, slightly opalescent liquid.

**3.3.2 Density**

The density depends on the particular composition, especially the aluminium ion content, expressed as a mass fraction of aluminium (Al) in %.

Typical value is 1,25 g/ml for 4,2 % Al.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>

**3.3.3 Solubility in water**

Polyaluminium hydroxide silicate sulfate is fully miscible with water.

NOTE Depending on the particular product, dilute solutions can hydrolyse and form a precipitate.

**3.3.4 Vapour pressure at 20 °C**

Not known.

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

100 °C.

**3.3.6 Crystallization point**

Typical value is 0 °C for 4,2 % Al.

**3.3.7 Specific heat**

Not known.

---

1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

3) 100 kPa = 1 bar.



**3.3.8 Viscosity (dynamic)**

Typical value is 11 mPa.s for 4,2 % Al at 25 °C.

**3.3.9 Critical temperature**

Not applicable.

**3.3.10 Critical pressure**

Not applicable.

**3.3.11 Physical hardness**

Not applicable

**3.4 Chemical properties**

Polyaluminium hydroxide silicate sulfate is a mildly acidic liquid which hydrolyses and forms a precipitate of aluminium hydroxide when diluted beyond a particular concentration.

NOTE Since aluminium compounds are amphoteric in nature, the solubility of aluminium depends on the pH value and the product should be used within an appropriate pH range.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 886:2005](https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005)

<https://standards.iteh.ai/catalog/standards/sist/4fc926d0-0b66-43cc-8e83-4d26872ed182/sist-en-886-2005>