



**SLOVENSKI STANDARD**  
**oSIST prEN 17841:2022**  
**01-junij-2022**

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**Kemikalije, ki se uporabljajo za pripravo pitne vode - Proti obraščanju membran - Sulfamska kislina**

Chemicals used for treatment of water intended for human consumption - Antifouling for membranes – Sulfamic acid

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Antifouling für Membranen - Amidosulfonsäure und -salze

Produit chimique utilisé pour le traitement de l'eau destinée à la consommation humaine - Produit antitartre pour membranes - Acide sulfamique

**Ta slovenski standard je istoveten z: prEN 17841**

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**ICS:**

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

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN 17841**

April 2022

ICS 71.100.80

English Version

## Chemicals used for treatment of water intended for human consumption - Antifouling for membranes - Sulfamic acid

Produit chimique utilisé pour le traitement de l'eau destinée à la consommation humaine - Produit antitartre pour membranes - Acide sulfamique

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Antifouling für Membranen - Amidosulfonsäure und -salze

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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## European foreword

This document (prEN 17841:2022) 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.

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## 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 1 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.

NOTE 2 This product is a precursor for a biocide and needs to comply with the relevant legislation in force. In the European Union, at the time of publication, this legislation is Regulation (EU) Nr. 528/2012 [1].

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## 1 Scope

This document is applicable to sulphamic acid used as antifoulant for membranes in the treatment of water intended for human consumption. It describes the characteristics and specifies the requirements and the corresponding analytical methods for sulphamic acid. It gives information on their use as antifoulant for membranes in water treatment.

## 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 ISO 3696, *Water for analytical laboratory use - Specification and test methods (ISO 3696)*

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*

ISO 10304-1, *Water quality — Determination of dissolved anions by liquid chromatography of ions — Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate*

ISO 11885, *Water quality — Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)*

DIN 32633 *Chemical analysis — Methods of Standard addition — Procedure, evaluation*

## 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:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

## 4 Description

### 4.1 Identification

#### 4.1.1 Chemical name

Sulphamic acid

#### 4.1.2 Synonym or common name

Amidosulfonic acid, sulfamic acid

#### 4.1.3 Relative molecular mass

97.09 g/mol

**prEN 17841:2022 (E)****4.1.4 Empirical formula**NH<sub>2</sub>SO<sub>3</sub>H**4.1.5 Chemical formula**NH<sub>2</sub>SO<sub>3</sub>H**4.1.6 CAS Registry Number <sup>1)</sup>**

5329-14-6

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

226-218-8

**4.2 Commercial form**

The products are supplied as

- solids with minimum 99 % (m/m) content, or
- aqueous solutions with typical concentration between 5 – 15 % (m/m)

All concentrations mentioned refer to the active matter (active acid) and shall be calculated accordingly.

**4.3 Physical properties****4.3.1 Appearance**

Solid: The product is available as colourless or white crystals or powder.

Liquid: The product is available as colourless aqueous solutions

**4.3.2 Density**

Solid:

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The bulk density of is approx. 2,1 - 2,2 kg/L at 25°C

Liquid:

The densities of solutions at 20 °C are:

5 % approx. 1,027 g/ml

10 % approx. 1,041 g/ml

15 % approx. 1,086 g/ml

**4.3.3 Solubility in water**

Solids:

ca. 180 g/L at 20 °C

Liquids:

miscible with water

Vapour pressure (at 20 °C)

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

<sup>2)</sup> European Inventory of Existing Commercial Chemical Substances.

Solids:

Not relevant (non-volatile solids).

Liquids:

Ca. 20 hPa (similar to water)

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

Solids: Not applicable

#### 4.3.5 Melting point

Solids:

205 °C (decomposition)

Liquids:

Not applicable.

#### 4.3.6 Specific heat

Not known.

#### 4.3.7 Viscosity, dynamic

For the solid product it is not applicable.

#### 4.3.8 Critical temperature (for gas)

Not applicable.

#### 4.3.9 Critical pressure (for gas)

Not applicable.

#### 4.3.10 Physical hardness

Not applicable.

### 4.4 Chemical properties

Sulphamic acid solutions are strongly acidic (pH approx. 1 for typical commercial forms).

## 5 Purity criteria

### 5.1 General

This document specifies the minimum purity requirements for sulphamic acid used for the treatment of water intended for human consumption. Limits are given for impurities commonly present in the product. Depending on the raw material and the manufacturing process other impurities may be present and, if so, this shall be notified to the user and when necessary to relevant authorities.

Users of this product should check the national regulations in order to clarify whether it is of appropriate purity for treatment of water intended for human consumption, taking into account raw water quality, required dosage, contents of other impurities and additives used in the product not stated in the product standard.

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