



**SLOVENSKI STANDARD**  
**SIST EN 12124:2000**

**01-november-2000**

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**Kemikalije, ki se uporabljajo za pripravo pitne vode - Natrijev sulfit**

Chemicals used for treatment of water intended for human consumption - Sodium sulfite

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natriumsulfit

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

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**Ta slovenski standard je istoveten z: EN 12124:1998**

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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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**en**

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EUROPEAN STANDARD

EN 12124

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EUROPÄISCHE NORM

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ICS 71.060.50; 71.100.80

Descriptors: potable water, water treatment, chemical compounds, sodium sulfite, description, physical properties, chemical properties, impurities, toxic substances, tests, conditioning, marking, storage, labelling

English version

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

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Natriumsulfit

This European Standard was approved by CEN on 5 September 1998.

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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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This European Standard 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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

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

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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 Standard :

- 1) this 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 ;
- 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.

## 1 Scope

This European standard is applicable to sodium sulfite used for treatment of water intended for human consumption. It describes the characteristics of sodium sulfite and specifies the requirements and the corresponding test methods for sodium sulfite. It gives information on its use in water treatment.

## 2 Normative references

This present European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN ISO 3696	Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)
ISO 418	Photography - Processing chemicals - Specifications for anhydrous sodium sulfite
ISO 3165	Sampling of chemical products for industrial use - Safety in sampling
ISO 5993	Sodium hydroxide for industrial use - Determination of mercury content Flameless atomic absorption spectrometric method
ISO 6206	Chemical products for industrial use - Sampling - Vocabulary
ISO 6332	Water quality - Determination of iron - Spectrometric method using 1,10-phenanthroline
ISO 6353-1	Reagents for chemical analysis - Part 1 : General test methods
ISO 8213	Chemical products for industrial use - Sampling techniques - Solid chemical products in the form of particles varying from powders to coarse lumps
ISO 9280	Water quality - Determination of sulfate - Gravimetric method using barium chloride

### 3 Description

#### 3.1 Identification

##### 3.1.1 Chemical name

Sodium sulfite.

##### 3.1.2 Synonym or common name

Sodium sulfite.

##### 3.1.3 Relative molecular mass

126,04.

##### 3.1.4 Empirical formula

Na<sub>2</sub>SO<sub>3</sub>.

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##### 3.1.5 Chemical formula

Na<sub>2</sub>SO<sub>3</sub>.

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

7757-83-7.

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

231-821-4.

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

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

## 3.2 Commercial form

The product is a crystalline powder.

## 3.3 Physical properties

### 3.3.1 Appearance and odour

The product is a white, fine crystalline, odourless powder.

### 3.3.2 Density

The particle density of the product is 2,63 g/cm<sup>3</sup> at 20 °C.  
The bulk density is 1,2 g/cm<sup>3</sup> to 1,5 g/cm<sup>3</sup> at 20 °C.

### 3.3.3 Solubility

The solubility of the product in water is 250 g/l at 20 °C.

### 3.3.4 Vapour pressure

Not applicable.

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

The product decomposes above 230 °C.

### 3.3.6 Crystallisation point

See 3.3.5.

### 3.3.7 Specific heat

Not known.

### 3.3.8 Viscosity, dynamic

Not applicable.

### 3.3.9 Critical temperature

Not applicable.

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



### 3.3.10 Critical pressure

Not applicable.

### 3.3.11 Physical hardness

Not applicable.

## 3.4 Chemical properties

The pH value of a saturated aqueous solution of sodium sulfite is in the range of 9,7 to 10,2.

At elevated temperatures (> 100 °C) sulfur dioxide is generated.

On contact with air, small amounts of sodium sulfate are formed.

Sodium sulfite releases sulfur dioxide when mixed with acids.

Sodium sulfite reacts violently with oxidizing agents; e.g. with sodium hypochlorite or hydrogen peroxide.

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## 4 Purity criteria

Limits have been given for impurities and toxic substances where these are likely to be present in significant quantities from the current production process and raw materials. If a change in the production process or raw materials leads to significant quantities of other impurities or by-products being present, this shall be notified to the user.

### 4.1 Composition of commercial product

The content of sodium sulfite shall not be less than 95 % (*m/m*) Na<sub>2</sub>SO<sub>3</sub>.

### 4.2 Impurities and main by-products

The content of sodium sulfate shall not exceed 5 % (*m/m*).

The content of iron (Fe) shall not exceed 25 mg/kg.