



BSI Standards Publication

Chemicals used for treatment of water intended for human consumption — Sodium disulfite

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee CII/59, Chemicals for drinking water treatment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EN 12121

November 2012

ICS 71.100.80

Supersedes EN 12121:2005

English Version

**Chemicals used for treatment of water intended for human
consumption - Sodium disulfite**

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

Produkte zur Aufbereitung von Wasser für den
menschlichen Gebrauch - Natriumdisulfit

This European Standard was approved by CEN on 23 September 2012.

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Contents

Page

Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Description	5
4 Purity criteria	7
5 Test methods	8
6 Labelling — Transportation — Storage	14
Annex A (informative) General information on sodium disulfite	17
Annex B (normative) General rules relating to safety	18
Bibliography	19

Foreword

This document (EN 12121:2012) 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of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

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 12121:2005.

The significant technical differences between this edition and EN 12121:2005 are as follows:

- Modification of 6.2 on labelling, deletion of the reference to EU Directive 80/778/EEC of 15 July 1980 in order to take account of the latest Directive in force.

According to the CEN/CENELEC Internal Regulations, the national standards organisations 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 European Standard:

- a) this European 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;
- 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 European Standard 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 European Standard is subject to regulation or control by National Authorities.

1 Scope

This European Standard is applicable to sodium disulfite used for treatment of water intended for human consumption. It describes the characteristics of sodium disulfite and specifies the requirements and the corresponding test methods for sodium disulfite. It gives information on its use in water treatment. It also determines the rules relating to safe handling and use (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 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 3629, *Photography — Processing chemicals — Specifications for potassium metabisulfite*

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 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 9297, *Water quality — Determination of chloride — Silver nitrate titration with chromate indicator (Mohr's method)*

ISO 22743, *Water quality — Determination of sulfates — Method by continuous flow analysis (CFA)*

3 Description

3.1 Identification

3.1.1 Chemical name

Sodium disulfite.

3.1.2 Synonym or common names

Sodium metabisulfite, sodium pyrosulfite.

3.1.3 Relative molecular mass

190,10.

3.1.4 Empirical formula

$\text{Na}_2\text{S}_2\text{O}_5$.

3.1.5 Chemical formula

$\text{Na}_2\text{S}_2\text{O}_5$.

3.1.6 CAS-Registry Number ¹⁾

7681-57-4.

3.1.7 EINECS reference ²⁾

231-673-0.

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, free-flowing fine crystalline powder with a slight odour of sulfur dioxide.

3.3.2 Density

The density of the product is 2,7 g/cm³ at 20 °C.

The bulk density is approximately 1,3 g/cm³ at 20 °C.

3.3.3 Solubility (in water)

The solubility of the product in water is 540 g/l at 20 °C.

3.3.4 Vapour pressure

Not applicable.

3.3.5 Boiling point at 100 kPa ³⁾

Not applicable.

3.3.6 Crystallisation point

The product decomposes above 150 °C.

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.