



SLOVENSKI STANDARD

SIST EN 936:2014

01-februar-2014

Nadomešča:
SIST EN 936:2007

Kemikalije, ki se uporabljajo za pripravo pitne vode - Ogljikov dioksid

Chemicals used for treatment of water intended for human consumption - Carbon dioxide

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch -
Kohlenstoffdioxid

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

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Ta slovenski standard je istoveten z: EN 936:2013

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

EN 936

December 2013

ICS 71.100.80

Supersedes EN 936:2006

English Version

Chemicals used for treatment of water intended for human consumption - Carbon dioxide

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Kohlenstoffdioxid

This European Standard was approved by CEN on 26 October 2013.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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EN 936:2013 (E)**Foreword**

This document (EN 936:2013) 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of an identical text or by endorsement, at the latest by June 2014, and conflicting national standards shall be withdrawn at the latest by June 2014.

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 936:2006.

Significant technical differences between this edition and EN 936:2006 are as follows:

- a) the transportation regulations and labelling have been updated;
- b) the requirement for carbon dioxide content is now 99,9 % instead of 99,0 % in the latest edition;
- c) possible impurities are taken into account;
- d) reference to sampling is changed;
- e) revision of clause for raw materials;
- f) revision of rules for safe handling and use of the product.

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According to the CEN-CENELEC Internal Regulations, the national standards organizations 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 to the 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.

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EN 936:2013 (E)**1 Scope**

This European Standard is applicable to carbon dioxide used for treatment of water intended for human consumption. It describes the characteristics of carbon dioxide and specifies the requirements and corresponding analytical methods for carbon dioxide. It also gives information on its use in water treatment.

2 Description**2.1 Identification****2.1.1 Chemical name**

Carbon dioxide.

2.1.2 Synonym or common name

Carbonic acid gas (carbonic anhydride).

2.1.3 Relative molecular mass

44,011.

2.1.4 Empirical formula

CO₂.

2.1.5 Chemical formula

CO₂.

2.1.6 CAS Registry Number¹⁾

124-38-9.

2.1.7 EINECS reference²⁾

204-696-9.

2.2 Commercial form

The carbon dioxide is supplied as a pressurised liquefied or refrigerated pressurised gas.

NOTE The solid form is not usually used for the treatment of water intended for human consumption.

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1) Chemical Abstracts Service Registry Number.

2) European Inventory of Existing Commercial Chemical Substances.

2.3 Physical properties

2.3.1 Appearance

The carbon dioxide is a colourless gas or liquid.

2.3.2 Density

The density of the gas at 0 °C and 101,3 kPa ³⁾ is 1,976 8 kg/m³, while the density of the liquid at 0 °C and 4 000 kPa is 933,318 kg/m³.

2.3.3 Solubility in water

The solubility of the gas in water is 1,72 g/l at 20 °C and 101,3 kPa.

2.3.4 Vapour pressure

The vapour pressure of the liquid is 5 733,0 kPa at 20 °C.

2.3.5 Boiling point at 100 kPa

See 2.3.6.

2.3.6 Melting point

The sublimation point of solid CO₂ is -78,9 °C and 101,3 kPa.

2.3.7 Specific heat

The specific heat of carbon dioxide is 0,827 kJ/kg x K at 0 °C and 100 kPa.

2.3.8 Viscosity (dynamic)

The viscosity of the liquid is 147×10^{-7} Pa x s at 20 °C.

2.3.9 Critical temperature

The critical temperature of the liquid is 31 °C.

2.3.10 Critical pressure

The critical pressure of the carbon dioxide is 7 383 kPa.

2.3.11 Physical hardness

Not applicable.

3) 100 kPa = 1 bar.