



SLOVENSKI STANDARD

SIST EN 15513:2008

01-januar-2008

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

Chemicals used for treatment of swimming pool water - Carbon dioxide

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Kohlenstoffdioxid

Produits chimiques utilisés pour le traitement de l'eau des piscines - Dioxyde de carbone

Ta slovenski standard je istoveten z: EN 15513:2007

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>

ICS:

13.060.25	Voda za industrijsko uporabo	Water for industrial use
71.100.80	Kemikalije za čiščenje vode	Chemicals for purification of water

SIST EN 15513:2008

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 15513:2008](#)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>

EUROPEAN STANDARD

EN 15513

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2007

ICS 71.100.80

English Version

Chemicals used for treatment of swimming pool water - Carbon dioxide

Produits chimiques utilisés pour le traitement de l'eau des piscines - Dioxyde de carbone

Produkte zur Aufbereitung von Schwimm- und Badebeckenwasser - Kohlenstoffdioxid

This European Standard was approved by CEN on 16 September 2007.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>



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.....	5
4.1 General.....	5
4.2 Composition of commercial product.....	5
4.3 Impurities and main by-products.....	5
4.4 Chemical parameters	5
5 Test methods.....	6
6 Labelling - Transportation - Storage.....	6
6.1 Means of delivery.....	6
6.2 Risk and safety labelling according to the EU Directives	6
6.3 Transportation regulations and labelling.....	6
6.4 Marking	6
6.5 Storage.....	7
Annex A (informative) General information on carbon dioxide.....	8
A.1 Origin	8
A.1.1 Raw materials.....	8
A.1.2 Manufacturing process	8
A.2 Use	8
A.2.1 Function.....	8
A.2.2 Form in which it is used	8
A.2.3 Treatment dose	8
A.2.4 Means of application	8
A.2.5 Secondary effects.....	8
A.2.6 Removal of excess of product.....	8
A.3 General rules relating to safety	9
A.3.1 Rules for safe handling and use	9
A.3.2 Emergency procedures.....	9
Bibliography.....	10

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae51d7e-ccb3-475a-bb5c-3010075371e3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae51d7e-ccb3-475a-bb5c-3010075371e3/sist-en-15513-2008>

Foreword

This document (EN 15513:2007) 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 April 2008, and conflicting national standards shall be withdrawn at the latest by April 2008.

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.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>

Introduction

With respect for potential adverse effects on the quality of swimming pool water, 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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>

1 Scope

This European Standard is applicable to carbon dioxide used for treatment of swimming pool water. It describes the characteristics of carbon dioxide and specifies the requirements and the corresponding test methods for carbon dioxide. It gives information on its use in swimming pool water treatment.

2 Normative references

The following referenced document is 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 936, *Chemicals used for the treatment of water intended for human consumption – Carbon dioxide*

3 Description

For the identification, the commercial form, the physical properties and the chemical properties see EN 936.

4 Purity criteria

4.1 General

This European Standard specifies the minimum purity requirements for carbon dioxide used for the treatment of swimming pool water. 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 the relevant authorities.

NOTE Users of the product should check national regulations in order to clarify whether it is of appropriate purity for treatment of swimming pool water, taking into account water quality, required dosage, and contents of other impurities and additives used in the product not stated in the product European Standard.

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

4.2 Composition of commercial product

The product shall contain at least a volume fraction of 99 % of carbon dioxide.

NOTE The composition of the commercial product is defined in the EU Directive 96/77/EC of December 2, 1996 (see [2]).

4.3 Impurities and main by-products

The residual gas content consists mostly of nitrogen, oxygen and moisture.

4.4 Chemical parameters

NOTE The chemical parameters and indicator parameters according to EU Directive 98/83/EC (see [3]) are not found in the gaseous phase. Pesticides and polycyclic aromatic hydrocarbons are not by-products of the manufacturing process.

EN 15513:2007 (E)**5 Test methods**

The methods for sampling and analysis are those specified in EN 936.

6 Labelling - Transportation - Storage**6.1 Means of delivery**

The carbon dioxide shall be delivered in pressured cylinders or by tankers.

In order that the purity of the product is not affected, the means of delivery shall not have been used previously for any different product or it shall have been specially cleaned and prepared before use.

6.2 Risk and safety labelling according to the EU Directives ¹⁾

Carbon dioxide is not subject to labelling regulations at the date of publication of this European Standard.

NOTE Annex I of the Directive 67/548/EEC on Classification, packaging and labelling of dangerous substances and its amendments and adaptations in the European Union contains a list of substances classified by the EU. Substances not in this annex I should be classified on the basis of their intrinsic properties according to the criteria in the Directive by the person responsible for the marketing of the substance.

6.3 Transportation regulations and labelling

Liquid carbon dioxide is listed as UN Number ²⁾ 1013. Refrigerated carbon dioxide is listed as UN Number 2187.

For liquid carbon dioxide:

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-2a0f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-2a0f007537fe3/sist-en-15513-2008>

RID ³⁾ ADR ⁴⁾ : class 2, classification code 2A

IMDG ⁵⁾ : class 2.

For refrigerated carbon dioxide:

RID ³⁾ ADR ⁴⁾ : class 2, classification code 3A.

IMDG ⁵⁾ : class 2.

6.4 Marking

The marking shall include the following:

— name "carbon dioxide", trade name and grade;

¹⁾ See [3].

²⁾ United Nations Number.

³⁾ Regulations concerning International carriage of Dangerous goods by rail.

⁴⁾ European Agreement concerning the international carriage of Dangerous goods by Road.

⁵⁾ International Maritime transport of Dangerous Goods.

- net mass;
- name and address of supplier and/or manufacturer;
- statement "this product conforms to EN 15513".

6.5 Storage

The product is stable during long term storage.

Pressure cylinders containing, carbon dioxide shall be protected from direct heat and storage rooms shall be well-ventilated, especially if they are below ground level. Cylinders shall preferably be stored horizontally; if upright, they shall be secured to prevent them toppling over.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 15513:2008](https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008)

<https://standards.iteh.ai/catalog/standards/sist/6ae31d7e-ecb3-475a-bb3e-30f007537fe3/sist-en-15513-2008>