

SVENSK STANDARD

SS-EN 16004:2011

Fastställt/Approved: 2011-12-05
Publicerad/Published: 2011-12-07
Utgåva/Edition: 1
Språk/Language: engelska/English
ICS: 13.060.20; 71.100.80

Processkemikalier för beredning av dricksvatten – Magnesiumoxid

**Chemicals used for treatment of water intended for human
consumption – Magnesium oxide**

This preview is downloaded from www.sis.se. Buy the entire standard via <https://www.sis.se/std-82427>

Standarder får världen att fungera

SIS (Swedish Standards Institute) är en fristående ideell förening med medlemmar från både privat och offentlig sektor. Vi är en del av det europeiska och globala nätverk som utarbetar internationella standarder. Standarder är dokumenterad kunskap utvecklad av framstående aktörer inom industri, näringsliv och samhälle och befrämjar handel över gränser, bidrar till att processer och produkter blir säkrare samt effektiviserar din verksamhet.

Delta och påverka

Som medlem i SIS har du möjlighet att påverka framtida standarder inom ditt område på nationell, europeisk och global nivå. Du får samtidigt tillgång till tidig information om utvecklingen inom din bransch.

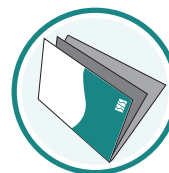
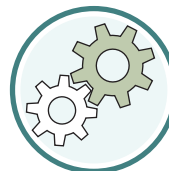
Ta del av det färdiga arbetet

Vi erbjuder våra kunder allt som rör standarder och deras tillämpning. Hos oss kan du köpa alla publikationer du behöver – allt från enskilda standarder, tekniska rapporter och standardpaket till handböcker och onlinetjänster. Genom vår webbtjänst e-nav får du tillgång till ett lättnavigerat bibliotek där alla standarder som är aktuella för ditt företag finns tillgängliga. Standarder och handböcker är källor till kunskap. Vi säljer dem.

Utveckla din kompetens och lyckas bättre i ditt arbete

Hos SIS kan du gå öppna eller företagsinterna utbildningar kring innehåll och tillämpning av standarder. Genom vår närhet till den internationella utvecklingen och ISO får du rätt kunskap i rätt tid, direkt från källan. Med vår kunskap om standarders möjligheter hjälper vi våra kunder att skapa verklig nytta och lönsamhet i sina verksamheter.

Vill du veta mer om SIS eller hur standarder kan effektivisera din verksamhet är du välkommen in på www.sis.se eller ta kontakt med oss på tel 08-555 523 00.



Standards make the world go round

SIS (Swedish Standards Institute) is an independent non-profit organisation with members from both the private and public sectors. We are part of the European and global network that draws up international standards. Standards consist of documented knowledge developed by prominent actors within the industry, business world and society. They promote cross-border trade, they help to make processes and products safer and they streamline your organisation.

Take part and have influence

As a member of SIS you will have the possibility to participate in standardization activities on national, European and global level. The membership in SIS will give you the opportunity to influence future standards and gain access to early stage information about developments within your field.

Get to know the finished work

We offer our customers everything in connection with standards and their application. You can purchase all the publications you need from us - everything from individual standards, technical reports and standard packages through to manuals and online services. Our web service e-nav gives you access to an easy-to-navigate library where all standards that are relevant to your company are available. Standards and manuals are sources of knowledge. We sell them.

Increase understanding and improve perception

With SIS you can undergo either shared or in-house training in the content and application of standards. Thanks to our proximity to international development and ISO you receive the right knowledge at the right time, direct from the source. With our knowledge about the potential of standards, we assist our customers in creating tangible benefit and profitability in their organisations.

If you want to know more about SIS, or how standards can streamline your organisation, please visit www.sis.se or contact us on phone +46 (0)8-555 523 00



Europastandarden EN 16004:2011 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN 16004:2011.

The European Standard EN 16004:2011 has the status of a Swedish Standard. This document contains the official version of EN 16004:2011.

© Copyright/Upphovsrätten till denna produkt tillhör SIS, Swedish Standards Institute, Stockholm, Sverige. Användningen av denna produkt regleras av slutanvändarlicensen som återfinns i denna produkt, se standardens sista sidor.

© Copyright SIS, Swedish Standards Institute, Stockholm, Sweden. All rights reserved. The use of this product is governed by the end-user licence for this product. You will find the licence in the end of this document.

Uppllysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna uppllysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Vattenreningskemikalier och industrikalk, SIS/TK 431.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

EN 16004

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2011

ICS 71.100.80

English Version

Chemicals used for treatment of water intended for human consumption - Magnesium oxide

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

Produkte zur Aufbereitung von Wasser für den menschlichen Gebrauch - Magnesiumoxid

This European Standard was approved by CEN on 8 October 2011.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Description	6
3.1 Identification.....	6
3.1.1 Chemical name.....	6
3.1.2 Synonym or common name.....	6
3.1.3 Relative molecular mass.....	6
3.1.4 Empirical formula.....	6
3.1.5 Chemical formula.....	6
3.1.6 CAS Registry Number	6
3.1.7 EINECS reference	7
3.2 Commercial forms	7
3.3 Physical properties.....	7
3.3.1 Appearance	7
3.3.2 Density	7
3.3.3 Solubility in water	7
3.3.4 Particle size	7
3.4 Chemical properties	7
4 Purity criteria.....	7
4.1 General.....	7
4.2 Composition of commercial product.....	8
4.3 Impurities and main by-product.....	8
4.4 Chemical parameters	8
5 Test methods.....	9
5.1 Sampling.....	9
5.2 Analyses	9
6 Labelling - Transportation - Storage.....	9
6.1 Means of delivery.....	9
6.2 Risk and safety labelling according to the EU directives	9
6.3 Transportation regulations and labelling.....	10
6.4 Marking	10
6.5 Storage.....	10
6.5.1 Long term stability.....	10
6.5.2 Storage incompatibilities	10
Annex A (informative) General information on magnesium oxide.....	11
A.1 Origin	11
A.1.1 Raw materials.....	11
A.1.2 Manufacturing process	11
A.2 Use	11
A.2.1 Function.....	11
A.2.2 Other properties.....	11
A.2.3 Form in which it is used.....	11
A.2.4 Treatment dose	11

A.2.5	Means of application	11
A.2.6	Secondary effects	12
A.2.7	Removal of excess product	12
A.3	Rules for safe handling and use	12
A.4	Emergency procedures	12
A.4.1	First aid	12
A.4.2	Spillage	12
A.4.3	Fire	12
	Bibliography	13

Foreword

This document (EN 16004:2011) 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 2012, and conflicting national standards shall be withdrawn at the latest by May 2012.

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, Croatia, 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.

Introduction

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the product covered by this Standard:

- 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;
- 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 the 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 magnesium oxide used for treatment of water intended for human consumption. It describes the characteristics of magnesium oxide and specifies the requirements and the corresponding test methods for magnesium oxide. It gives information on its use in water treatment.

2 Normative references

The following referenced documents are 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 12485, *Chemicals used for treatment of water intended for human consumption — Calcium carbonate, high-calcium lime, half-burnt dolomite, magnesium oxide and calcium magnesium carbonate — Test methods*

ISO 3165, *Sampling of chemical products for industrial use — Safety in sampling*

ISO 6206, *Chemical products for industrial use — Sampling — Vocabulary*

3 Description

3.1 Identification

3.1.1 Chemical name

Magnesium oxide.

3.1.2 Synonym or common name

Periklas/magnesia.

3.1.3 Relative molecular mass

40,31.

3.1.4 Empirical formula

MgO.

3.1.5 Chemical formula

MgO.

3.1.6 CAS Registry Number ¹⁾

MgO: 1309-48-4.

1) Chemical Abstracts Service Registry Number.

3.1.7 EINECS reference ²⁾.

MgO: 215-171-9.

3.2 Commercial forms

Magnesium oxide is available in granular form of various particle size ranges.

3.3 Physical properties

3.3.1 Appearance

The product is a grey material in round granular form.

3.3.2 Density

The density is 3,6 g/cm³ at 20 °C.

The bulk density is from 1,1 g/cm³ to 1,3 g/cm³.

3.3.3 Solubility in water

The solubility of product is equal to 0,0062 g/l at 20 °C.

3.3.4 Particle size

It varies depending on the application (see A.2.3).

3.4 Chemical properties

Magnesium oxide product reacts as an alkali when dissolved in water. With carbon dioxide and water it hydrolyses and reacts to form magnesium hydrogen carbonate.

4 Purity criteria

4.1 General

This European Standard specifies the minimum purity requirements for calcium magnesium oxide 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 the relevant authorities.

NOTE 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 this product standard.

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.

2) European Inventory of Existing Commercial Chemical Substances.