



NSAI
Standards

Irish Standard
I.S. EN 16811-2:2016

Winter service equipment and products - De-icing agents - Part 2: Calcium chloride and Magnesium chloride - Requirements and test methods

I.S. EN 16811-2:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 16811-2:2016 is the adopted Irish version of the European Document EN 16811-2:2016, Winter service equipment and products - De-icing agents - Part 2: Calcium chloride and Magnesium chloride - Requirements and test methods

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EUROPEAN STANDARD

EN 16811-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 13.030.40; 71.100.45

English Version

**Winter service equipment and products - De-icing agents -
Part 2: Calcium chloride and Magnesium chloride -
Requirements and test methods**

Matériels de viabilité hivernale - Fondants routiers -
Partie 2 : Chlorure de calcium et chlorure de
magnésium - Exigences et méthodes d'essai

Winterdienstausrüstung - Enteisungsmittel - Teil 2:
Calcium- und Magnesiumchlorid - Anforderungen und
Prüfverfahren

This European Standard was approved by CEN on 15 April 2016.

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.

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EN 16811-2:2016 (E)**European foreword**

This document (EN 16811-2:2016) has been prepared by Technical Committee CEN/TC 337 “Road operation equipment and products”, 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of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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.

EN 16811, *Winter service equipment and products — De-icing agents*, is currently composed with the following parts:

- *Part 1: Sodium chloride — Requirements and test methods*;
- *Part 2: Calcium chloride and Magnesium chloride — Requirements and test methods*;
- *Part 3: Other solid and liquid de-icing agents — Requirements and test methods* [CEN/TS].

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Introduction

De-icing agents are important for the winter maintenance of roads. They can prevent and, in addition to it, eliminate slippery conditions.

The standard describes the requirements for de-icing agents and their testing methods. The requirements are different for using, storage and type of distribution (spreading and spraying). These need different properties.

The aim of this standard is an easy description of the product specifications for tenders and other purchasing procedures.

EN 16811-2:2016 (E)**1 Scope**

This European Standard specifies the essential requirements of calcium chloride and magnesium chloride for spreading on roads for winter maintenance and includes tests of these requirements. The requirements are specified for calcium chloride and magnesium chloride in solid form and in water solution, which is delivered to the customer.

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 932-1, *Tests for general properties of aggregates — Part 1: Methods for sampling*

EN 1235, *Solid fertilizers — Test sieving (ISO 8397:1988 modified)*

EN 1236, *Fertilizers — Determination of bulk density (loose) (ISO 3944:1992 modified)*

EN 1484, *Water analysis — Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC)*

EN 14016-2, *Binders for magnesite screeds — Caustic magnesia and magnesium chloride — Part 2: Test methods*

EN 15144, *Winter maintenance equipment — Terminology — Terms for winter maintenance*

EN 16198, *Fertilizers — Determination of magnesium by complexometry*

EN 16811-1, *Winter service equipment and products — De-icing agents — Part 1: Sodium chloride — Requirements and test methods*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

EN ISO 9377-2, *Water quality — Determination of hydrocarbon oil index — Part 2: Method using solvent extraction and gas chromatography (ISO 9377-2)*

EN ISO 10523, *Water quality — Determination of pH (ISO 10523)*

EN ISO 11885, *Water quality — Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES) (ISO 11885)*

EN ISO 12846, *Water quality — Determination of mercury — Method using atomic absorption spectrometry (AAS) with and without enrichment (ISO 12846)*

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 649-2, *Laboratory glassware — Density hydrometers for general purposes — Part 2: Test methods and use*

ISO 758, *Liquid chemical products for industrial use — Determination of density at 20 degrees C*

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