
Irish Standard
I.S. EN 62877-1:2016

# Electrolyte and water for vented lead acid accumulators - Part 1: Requirements for electrolyte

**I.S. EN 62877-1:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 62877-1:2016 is the adopted Irish version of the European Document EN 62877-1:2016, Electrolyte and water for vented lead acid accumulators - Part 1: Requirements for electrolyte

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

**EN 62877-1**

May 2016

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English Version

# Electrolyte and water for vented lead acid accumulators - Part 1: Requirements for electrolyte (IEC 62877-1:2016)

Electrolyte et eau pour accumulateurs plomb-acide ouverts - Partie 1: Exigences pour l'électrolyte (IEC 62877-1:2016)

Elektrolyte und Wasser für geschlossene Blei-Säure-Batterien - Teil 1: Anforderungen an Elektrolyte (IEC 62877-1:2016)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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



Ref. No. EN 62877-1:2016 E

## European foreword

The text of document 21/874/FDIS, future edition 1 of IEC 62877-1, prepared by IEC/TC 21 "Secondary cells and batteries" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62877-1:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-12-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-03-02

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The text of the International Standard IEC 62877-1:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

| | | |
|---|---|---|
| IEC 62485-3 | NOTE | Harmonized as EN 62485-3. |

# Annex ZA
(normative)

## Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 62877-2 | - | Electrolyte and water for vented lead acid accumulators - Part 2: Requirements for water | EN 62877-2 | - |

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IEC 62877-1

Edition 1.0 2016-01

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

## Electrolyte and water for vented lead acid accumulators – Part 1: Requirements for electrolyte

## Électrolyte et eau pour accumulateurs plomb-acide ouverts – Partie 1: Exigences pour l'électrolyte

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# INTERNATIONAL STANDARD

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## Electrolyte and water for vented lead acid accumulators – Part 1: Requirements for electrolyte

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# ELECTROLYTE AND WATER FOR VENTED LEAD ACID ACCUMULATORS –

## Part 1: Requirements for electrolyte

## FOREWORD

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International Standard IEC 62877-1 has been prepared by IEC technical committee 21: Secondary cells and batteries.

The text of this standard is based on the following documents:

| FDIS | Report on voting |
|---|---|
| 21/874/FDIS | 21/881/RVD |

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 62877 series can be found, under the general title *Electrolyte and water for vented lead acid accumulators*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# ELECTROLYTE AND WATER FOR VENTED LEAD ACID ACCUMULATORS –

# Part 1: Requirements for electrolyte

## 1 Scope

This part of IEC 62877 applies to electrolyte and their components used for filling vented lead-acid batteries, for example dry charged cells or batteries, and for electrolyte replacement or electrolyte density adjustment of batteries in operation. This international standard defines the composition, purity and properties of electrolyte to be applied where specific instructions from the battery manufacturer are not available.

## 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.

IEC 62877-2, *Electrolyte and water for vented lead acid accumulators – Part 2: Requirements for water*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply

**3.1**
**electrolyte**
diluted sulfuric acid ($H_2SO_4$) for lead-acid accumulators

Note 1 to entry: The electrolyte is prepared by mixing concentrated sulfuric acid or sulfuric acid with high density of $d > 1{,}30$ kg/l and purified water to achieve the density values specified by the battery manufacturer or specified in standards related to the type and battery design in question for a defined state of charge. Its purity meet the requirements laid down in Table 3.

Note 2 to entry: Concentrated sulfuric acid is a colorless, highly corrosive and etching liquid with a density 1,84 kg/l.

**3.2**
**water**
purified water ($H_2O$) used for the preparation of electrolyte for batteries and for the replacement (topping up) of water loss in the operating electrolyte due to decomposition of water by overcharging and evaporation

Note 1 to entry: Purified water meet the requirements specified in IEC 62877-2.

**3.3**
**filling electrolyte**
diluted sulfuric acid to be used for the first filling of batteries or for the replacement of contaminated operating electrolyte