

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 ELECTROTECHNICAL COMMISSION

**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

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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