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Responsible committee: PEL/21 Secondary cells and batteries

Interested committees:

Title: BS EN IEC 62902 Secondary cells and batteries - Marking symbols for identification of their chemistry

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



21/1180/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER: IEC 62902 ED2	
DATE OF CIRCULATION: 2023-11-10	CLOSING DATE FOR COMMENTS: 2024-02-02
SUPERSEDES DOCUMENTS: 21/1170/CD, 21/1176A/CC	

IEC TC 21 : SECONDARY CELLS AND BATTERIES	
SECRETARIAT: France	SECRETARY: Mr Yves BOUDOU
OF INTEREST TO THE FOLLOWING COMMITTEES: SC 21A, TC 35	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☒ ENVIRONMENT ☐ QUALITY ASSURANCE ☒ SAFETY	

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

Secondary cells and batteries - Marking symbols for identification of their chemistry

NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SECONDARY CELLS AND BATTERIES –
MARKING SYMBOLS FOR IDENTIFICATION OF THEIR CHEMISTRY****FOREWORD**

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International Standard IEC 62902 has been prepared by IEC technical committee 21: Secondary cells and batteries.

This second edition cancels and replaces the first edition published in 2019. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Added an Introduction
- b) Added exemptions and clarifications for the background color requirement of the marking, including an optional frame
- c) Added a calculation method for the battery volume
- d) Added a second footnote to the Scope
- e) Added a term and definition for the principal display panel
- f) Added additional chemistry information for Li-ion batteries
- g) Added a new Subclause on adaptive size
- h) Clarified the test methods for durability / permanence of the marking



130 The text of this International Standard is based on the following documents:

FDIS	Report on voting

131
132 Full information on the voting for the approval of this International Standard can be found in the
133 report on voting indicated in the above table.

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

135 The committee has decided that the contents of this document will remain unchanged until the
136 stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to
137 the specific document. At this date, the document will be

- 138 • reconfirmed,
- 139 • withdrawn,
- 140 • replaced by a revised edition, or
- 141 • amended.

142

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

143

144

INTRODUCTION

145 The aim of this document is to introduce uniform marking symbols for the identification of the
146 battery chemistries prevailing on the market. A primary reason is that lead smelters around the
147 world are reporting increasing numbers of Lithium ion batteries finding their way into the Lead-
148 acid battery waste stream. Because the shape and design of these batteries sometimes is very
149 similar, it can be difficult for sorting facilities and battery smelters to distinguish one technology
150 from the other if there is no clear identification of the battery chemistry by marking symbols.

151 Processing Lithium ion batteries within a Lead smelter, e-waste facility, or municipal waste
152 sorting facility, can result in fire or explosions, with numerous accidents or near-accidents
153 already reported in European and US recycling facilities.

154 Besides Lead-acid and Lithium ion batteries, the labelling scheme should also apply to other
155 battery chemistries with a significant market share, such as Nickel Metal Hydride and Nickel
156 Cadmium. Other batteries, such as Sodium ion batteries, should be included in the marking
157 scheme when their market share becomes significant.

158 A clear identification of the battery chemistry would also be helpful during transport, installation,
159 and operation.

160 The following standards/recommendations were considered during the development of this
161 document:

162 The Battery Association of Japan (BAJ) has issued 'Guidelines for Recycle Mark on
163 rechargeable cells and batteries for portable applications' which include an optional colour code
164 system for identifying major (rechargeable) battery chemistries: Pb, Ni-Cd, Ni-MH, and Li-ion.
165 These Guidelines also distinguish different cathode materials as well as important impurities
166 (mostly from the anode material).

167 Call2Recycle has introduced in Canada and the United States of America a licensed labelling
168 program for batteries. It is a non-profit organization that collects and recycles batteries on behalf
169 of companies that pay a fee to license the label.

170 The recycling symbol required on batteries within the Scope of this document is the General
171 Symbol for Recovery/Recyclable as standardised in ISO 7000-1135, see item 1 in [Table 1](#). It is
172 worth noting the information that ISO offers for this symbol: Function/description: To indicate
173 that the marked item or its material is part of a recovery or recycling process. Additional
174 information: The symbol is applicable only to those products or materials for which at the end
175 of life there is a well-established collection route and recycling process, and which does not
176 significantly impair the effectiveness of other recycling schemes.

177 Battery marking is also subject of regional legislation. One example is the crossed-out wheeled
178 bin, used in the European Union (EU) and in some other countries to make consumers aware
179 of their obligation to offer batteries for separate collection. The symbol is combined with
180 symbols for hazardous substances such as cadmium (Cd) and lead (Pb) exceeding certain
181 concentration levels per Regulation (EU) 2023/1542 (Batteries Regulation).

182 In the frame of discussions aiming at improving collection programs, it was suggested that
183 battery labels should have a consistent and simple marking (e.g., a colour code) across all
184 battery chemistries to encourage and aid appropriate handling which should, at a minimum,
185 address three primary goals – in descending order of priority:

- 186 1) Inform and educate consumers to keep batteries out of the trash and curbside recycling,
187 and direct batteries to dedicated battery recycling networks where available.
- 188 2) Provide consumers and recycling network employees human-readable information to enable
189 sorting of used batteries among major chemistry families (e.g., Pb, Li-ion, Ni-Cd, Ni-MH,
190 and Li-metal).