



Ministry of Defence Defence Standard 61-21

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General Specification For Batteries Supplement 030 Specification for Alkaline Manganese Battery 7.5V, NSN 6135-99-551-1147



AMENDMENT RECORD

Amd No	Date	Text Affected	Signature and Date

REVISION NOTE

The content of this supplement has been aligned with the Defence Standard for batteries, Def.Stan 61-21.

HISTORICAL RECORD

This supplement supersedes Defence Standard 61-3 Supplement B/Issue 1 dated 7th May 1993.

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PREFACE

Standards for Defence

Specification for

Alkaline Manganese Battery

7.5V, NSN 6135-99-551-1147

- a.** This supplement shall be read in conjunction with Def Stan 61-21.
- b.** This supplement provides a definitive specification for the electrical, physical, performance and nomenclature requirements for a 7.5V Alkaline Manganese battery.
- c.** This supplement has been agreed by the authorities concerned with its use and is intended to be used whenever relevant in all future designs, contracts, orders etc. and whenever practicable by amendment to those already in existence. If any difficulty arises which prevents application of this Defence Standard and its associated supplements, the UK Defence Standardisation (DStan) shall be informed so that a remedy may be sought.
- d.** Any enquiries regarding this standard in relation to an invitation to tender or a contract in which it is incorporated are to be addressed to the responsible technical or supervising authority named in the invitation to tender or contract.
- e.** Compliance with this Defence Standard shall not in itself relieve any person from any legal obligations imposed upon them.
- f.** This standard has been devised solely for the use of the Ministry of Defence (MOD) and its contractors in the execution of contracts for the MOD. To the extent permitted by law, the MOD hereby excludes all liability whatsoever and howsoever arising (including, but without limitation, liability resulting from negligence) for any loss or damage however caused when the standard is used for any other purpose.

TEXT

Standards for Defence

Specification for

Alkaline Manganese Battery

7.5V, NSN 6135-99-551-1147

SECTION 1 GENERAL REQUIREMENTS

0 INTRODUCTION

It is Ministry of Defence (MOD) policy to purchase batteries against performance specifications whenever possible. Defence Standard 61-21 and its series of supplements has been generated to address the current requirements for batteries. This supplement is applicable when invoked directly by a MOD invitation to tender, contract, or when referred to by other MOD battery specifications.

1 SCOPE

This supplement provides a definitive specification for the electrical, physical, performance and nomenclature requirements for a 7.3V Alkaline Manganese battery, NSN 6135-99-551-1147. This supplement does not invoke Product Conformity Certification.

2 WARNING

The Ministry of Defence (MOD), like its contractors, is subject to both United Kingdom and European laws regarding Health and Safety at Work, without exemption. All Defence Standards either directly or indirectly invoke the use of processes and procedures that could be injurious to health if adequate precautions are not taken. Defence Standards or their use in no way absolves users from complying with statutory and legal requirements relating to Health and Safety at Work.

SECTION 1 GENERAL REQUIREMENTS

3 RELATED DOCUMENTS

3.1 For the purposes of this supplement all related documents are listed in Defence Standard 61-21.

3.2 Reference in this standard to any related document means in any invitation to tender or contract the edition and all amendments current at the date of such tender or contract unless a specific edition is indicated.

3.3 In consideration of **3.2** above, users shall be fully aware of the issue and amendment status of all related documents, particularly when forming part of an invitation to tender or contract. Responsibility for the correct application of standards rests with users.

3.4 DStan can advise regarding where related documents are obtained from. Requests for such information can be made to the DStan Helpdesk. How to contact the helpdesk is shown on the outside rear cover of Def Stans.

4 DEFINITIONS

Def Stan 61-21 definitions shall apply.

5 ABBREVIATIONS

Def Stan 61-21 abbreviations shall apply.

SECTION 2 ELECTRICAL CHARACTERISTICS

6 ELECTROCHEMICAL SYSTEM

The electrochemical system shall be defined by BS EN 60086-1: system designation L.

7 NOMINAL AND OFF-LOAD VOLTAGE

The off-load voltage shall not be more than 15% above the nominal voltage of 7.5 V.

8 ON-LOAD VOLTAGE

The battery shall have a maximum on load voltage of 7.3 V, when a current 30 ± 2 mA is delivered.

SECTION 3 PHYSICAL CHARACTERISTICS

9 DIMENSIONS

The dimensions of the battery will be in accordance with **Figure 1**.

10 MASS

The nominal mass of the battery shall be 150g.

11 CONSTRUCTION TERMINALS AND MARKING

A round battery containing 5 LR6 cells in series with a suitable rated diode to limit the OLV to 7.3 V. The cells shall be bonded within an insulating plastic sleeve in accordance with figure 1.

The cells used must be released and certified in accordance with Def Stan 61-21 Supplement 1 with the exception that commercial livery can be used.

The terminals shall be in accordance with **figures 3 and 4**.

The battery will be fitted with two plastic end caps, which are an interference fit.

Battery markings shall include the following details:

Manufacture's name or initials

Voltage

Chemical System

Date of manufacture

Nato Stock Number

Terminal Polarity

SECTION 4 PRODUCT CONFORMITY CERTIFICATION

12 GENERAL REQUIREMENTS

The Product Conformity Certification requirements defined in Section 2 of Def Stan 61-21 are not applicable to this supplement. However, a Declaration of Conformity is required for the component cell to Def Stan 61-21 Supplement 1.

SECTION 5 MARKING REQUIREMENTS

13 GENERAL REQUIREMENTS

Commercial product markings are acceptable provided they are in accordance with clause 11.

SECTION 6 PACKAGING AND LABELLING REQUIREMENTS

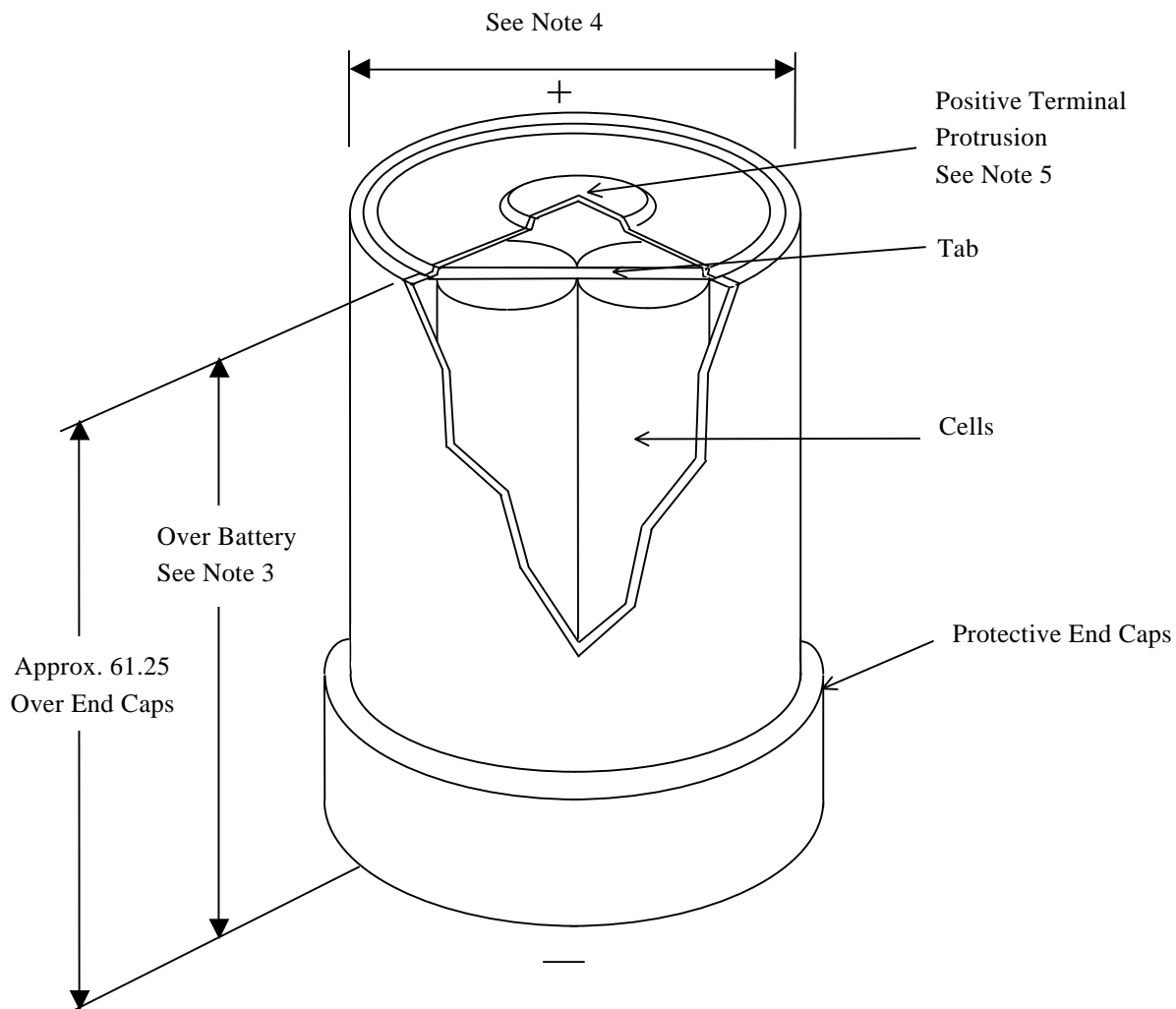
14 GENERAL REQUIREMENTS

In addition to the packaging requirements stated in the contract, all levels of packaging shall include:

- a. The battery NATO Stock number.
- b. The date of manufacture.
- c. The battery shelf life in the format “NOT TO BE STORED BEYOND *MM,YY*” which shall be 36 months from the date of cell/battery manufacture.

The product shall be packed to enable transportation by all modes (land, sea and air).

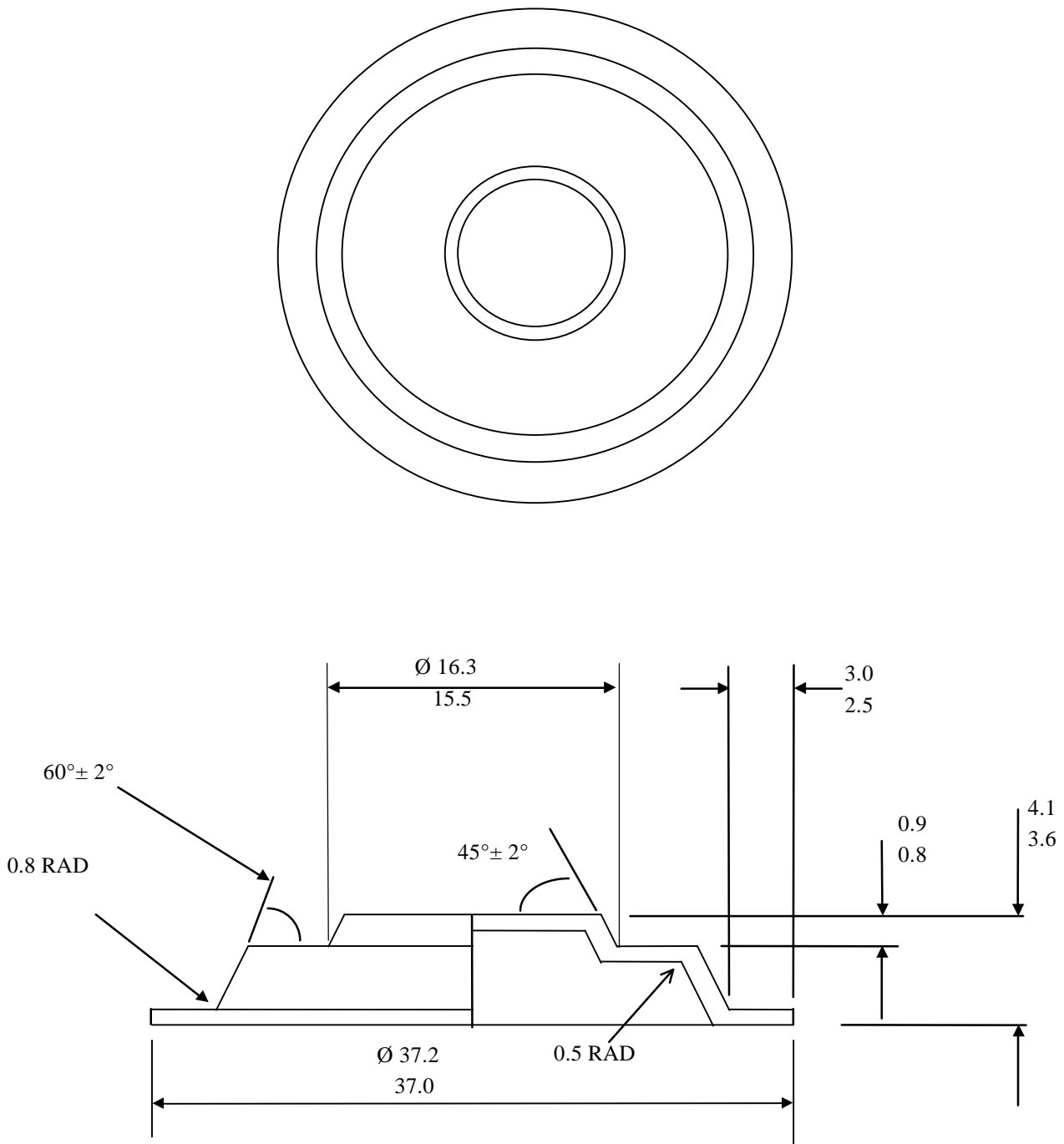
Figure 1 General Arrangement Drawing of Battery



Notes:

- 1 Drawing not to scale.
- 2 All dimension in mm.
- 3 Battery overall length to be between 57.9 and 59.5 mm.
- 4 Battery diameter to be between 37.3 and 38.9 mm.
- 5 The battery terminals shall protrude above the crimped end of the insulation sleeving between 0.38 and 1.00mm.
- 6 NSN 6135-99-551-1147.

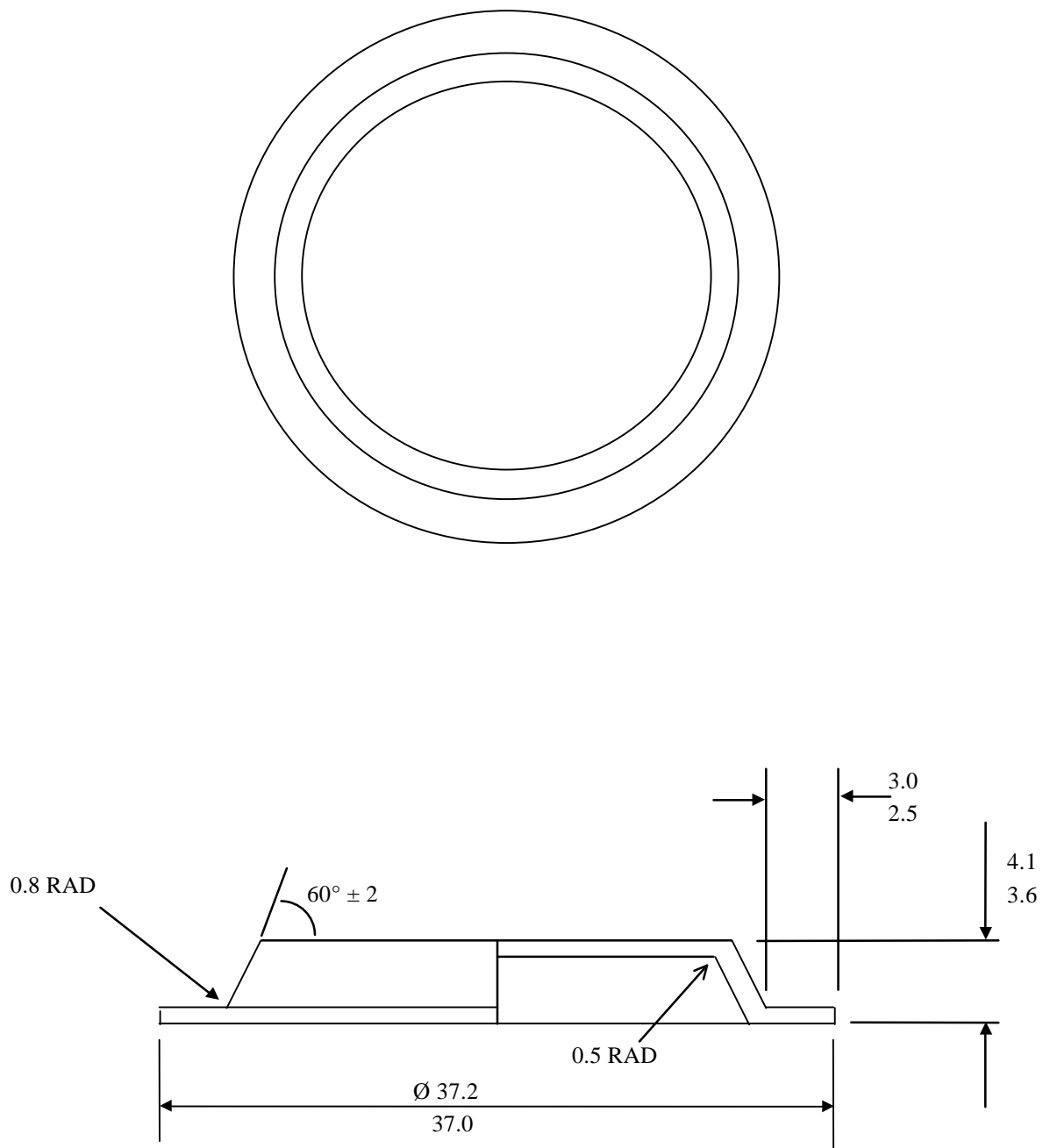
Figure 2 Positive Terminal Drawing



Notes:

- 1 Not Drawn to Scale.
- 2 All dimensions in mm.
- 3 Material to be nickel plated steel.
- 4 Finish – free from grease and burrs.

Figure 3 Negative Terminal Drawing



Notes:

- 1 Not Drawn to Scale.
- 2 All dimensions in mm.
- 3 Material to be nickel plated steel.
- 4 Finish – free from grease and burrs.

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UK Defence Standardization
Kentigern House
65 Brown Street
GLASGOW G2 8EX

DStan Helpdesk

Tel 0141 224 2531/2
Fax 0141 224 2503
Internet e-mail enquiries@dstan.mod.uk

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The DStan file reference relating to work on this standard is D/DStan/61/21/30.

Contract Requirements

When Defence Standards are incorporated into contracts users are responsible for their correct application and for complying with contractual and statutory requirements. Compliance with a Defence Standard does not in itself confer immunity from legal obligations.

Revision of Defence Standards

Defence Standards are revised as necessary by up issue or amendment. It is important that users of Defence Standards should ascertain that they are in possession of the latest issue or amendment. Information on all Defence Standards is contained in Def Stan 00-00 Standards for Defence Part 3 , Index of Standards for Defence Procurement Section 4 'Index of Defence Standards and Defence Specifications' published annually and supplemented regularly by Standards in Defence News (SID News). Any person who, when making use of a Defence Standard encounters an inaccuracy or ambiguity is requested to notify the Directorate of Standardization (DStan) without delay in order that the matter may be investigated and appropriate action taken.