

Australian/New Zealand Standard™

**Electrical equipment for mines and
quarries**

**Part 5: Battery powered electrical
mobile machines**



AS/NZS 4871.5:2010

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-023, Electrical Equipment in Mines and Quarries. It was approved on behalf of the Council of Standards Australia on 13 April 2010 and on behalf of the Council of Standards New Zealand on 23 April 2010.
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The following are represented on Committee EL-023:

Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Industry Group
Aviation and Marine Engineers Association, New Zealand
Department of Mines and Energy, Qld
Department of Primary Industries, Mineral Resources, NSW
Electrical Apparatus Service Association (Australia)
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-023, Electrical Equipment in Mines and Quarries, to supersede AS/NZS 4871.5:2002, *Battery powered electrical mobile machines*.

The objective is to set out the minimum requirements for the design, construction and testing of battery powered mobile machines for use in mines and quarries.

This Standard is Part 5 of the series AS/NZS 4871, *Electrical equipment for mines and quarries*.

The AS/NZS 4871 series comprises the following parts:

Part 1: General requirements

Part 2: Distribution, control and auxiliary equipment

Part 3: Substations

Part 4: Mains powered electrical mobile machines

Part 5: Battery powered electrical mobile machines (this Part)

Part 6: Diesel powered machinery and ancillary equipment

The term 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

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Australian/New Zealand Standard
Electrical equipment for mines and quarries

Part 5: Battery powered electrical mobile machines

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for the design, construction and testing of battery powered mobile machines used in association with mining and quarrying activities.

1.2 APPLICATION

All battery powered mobile machines shall comply with the requirements of AS/NZS 4871.1 and the requirements of this Standard.

This Standard shall be read in conjunction with AS/NZS 4871.1 and AS/NZS 4871.4.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

- 1334 Methods of testing conveyor and elevator belting
- 1334.9 Part 9: Determination of electrical resistance of conveyor belting
- 1334.10 Part 10: Determination of ignitability and flame propagation characteristics of conveyor belting
- 2402 Traction batteries—Lead-acid (series)
- 60529 Degrees of protection provided by enclosures (IP Code)

AS/NZS

- 4871 Electrical equipment for coal mines for use underground
- 4871.1 Part 1: General requirements
- 4871.4 Part 4: Mains powered electrical mobile machines

1.4 DEFINITIONS

For the purpose of this Standard, the definitions in AS/NZS 4871.1 apply.

1.5 EXISTING EQUIPMENT

In recognition of changes made to this edition of this Standard, existing equipment should be assessed for risk and interim control measures should be implemented where necessary.

Compliance improvements should be made within a time frame that takes into consideration the associated risk levels.