

AS/NZS 4871.1:2010

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Australian/New Zealand Standard™

## **Electrical equipment for mines and quarries**

### **Part 1: General requirements**



## **AS/NZS 4871.1:2010**

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:

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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  
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## **Electrical equipment for mines and quarries**

### **Part 1: General requirements**

Originated as part of AS 1039—1972, AS 1740—1975, AS 2595.1—1983 and AS 2989—1987.

AS 1039—1986, AS 1740—1990, AS 2595.1—1992 and AS 2989—1992 jointly revised, amalgamated and redesignated in part as AS/NZS 4781.1:2002.

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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 4871.1:2002, *Electrical equipment for coal mines, for use underground*, Part 1: *General requirements*.

The objective of this Standard is to set out the minimum design, manufacturing, testing and performance requirements for electrical equipment intended for use in mines and quarries.

This Standard is Part 1 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 (this Part)

Part 2: Distribution, control and auxiliary equipment

Part 3: Substations

Part 4: Mains powered electrical mobile machines

Part 5: Battery powered electrical mobile machines

Part 6: Diesel powered machinery and ancillary equipment

This Standard differs from the 2002 edition as follows:

- (a) The title and scope changed from coal mining to cover all mining and quarrying activities.
- (b) Addition of Part 6.
- (c) Expansion of general requirements in Part 1 to avoid duplication in the other parts.
- (d) General improvements including: Changes to earth-fault protection to allow a more flexible systems approach to protection settings, improvements to the testing requirements moved to Appendix H, alignment of protection requirements with the new release of AS 2081 series (to be published), alignment with AS 60204, guidance on hazards associated with variable speed drives, expansion of risk management.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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