

Australian/New Zealand Standard™

**Competencies for working with
electrical equipment for hazardous
areas (EEHA)**

**Part 2: Guide for training and
assessment**

AS/NZS 4761.2:2003

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee P-012, EEHA Competency Standards Advisory Panel. It was approved on behalf of the Council of Standards Australia on 29 November 2002 and on behalf of the Council of Standards New Zealand on 27 November 2002. It was published on 21 January 2003.

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Australian/New Zealand Standard™

Competencies for working with electrical equipment for hazardous areas (EEHA)

Part 2: Guide for training and assessment

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee, P-012, EEHA Competency Standards Advisory Panel.

A1 | *This Standard incorporates Amendment No. 1 (March 2003). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.*

An equivalent set of competency (unit) Standards has been formatted for the New Zealand Qualifications Framework by the ElectroTechnology Industry Training Organization (ETITO), and endorsed by the Joint Committee P-012. The Unit Standards are registered with the New Zealand Qualifications Authority (NZQA), under the domain *Electrical Equipment for Hazardous Areas*.

The objective of this Standard is to provide guidance for the set up of training and assessment programs applicable to the Units of Competency needed for work associated with electrical equipment for hazardous areas and contained in Part 1.

These Competency Standards are a replica of those included in the EE-Oz Training Standards *National Electrotechnology Training Package*, endorsed by the National Training Quality Council (NTQC) (ANTA's endorsing body). To ensure consistency and concurrence between the two sets of documents (this series of Standards and the National Electrotechnology Training Package) maintenance and revision of these documents will always be carried out simultaneously through the established Joint Standards Committee P-012, EEHA Competency Standards Advisory Panel, and amendments thereto processed in accordance with the respective organizational requirements.

This Standard forms part of a series covering the competencies for working with electrical equipment for hazardous areas, and the training materials/components supporting such competencies.

The series is as follows:

AS/NZS	
4761	Competencies for working with electrical equipment for hazardous areas (EEHA)
4761.1	Part 1: Competency Standards
4761.2	Part 2: Guide for training and assessment (this Standard)

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FOREWORD

Although various Australian and New Zealand Standards and the relevant statutory/regulatory requirements lay down standard criteria for the manufacture, installation, use and maintenance of explosion-protected electrical equipment in hazardous areas, no such reference exists for the competencies needed for work associated with such equipment for hazardous areas.

In the context of this Series, ‘hazardous areas’ are areas in which an explosive atmosphere may be present. Unless electrical equipment situated in such areas is constructed, installed and maintained in a special way, it may provide the energy and temperature necessary to ignite the atmosphere, usually with devastating results. The special design features of electrical equipment and systems used for these ‘hazardous areas’ are known as explosion-protection. They form part of the risk management strategies to ensure a safe and healthy working environment.

The development of Competency Standards for electrical equipment for hazardous areas arose from concern with the variability in skills of electrical workers and others dealing with this equipment. Although training has been available, it was usually confined to the technical aspects and there was no national strategy to provide this specific training.

The concern over competence was heightened by the trend away from prescriptive regulations towards performance-based regulations. The performance-based approach places the ‘duty of care’ responsibilities on enterprises and individuals which, in turn, is said to promote self-monitored quality assurance. This results in greater compliance with requirements than is the case with the inspectoral methods that accompany prescriptive regulations.

Since the early 1990s industries have expressed the need for a set of National Competency Standards to be used by any industry sector or enterprise, with regards to explosion-protected equipment for hazardous areas.

To meet this need a set of National Competency Standards for Electrical Equipment in Hazardous Areas (EEHA) was developed in 1996 through the *National Utilities and Electrotechnology Industry Training Advisory Board* (NUEITAB) with support from the *Australian National Training Authority* (ANTA). Standards Australia was an active participant in the preparation of these Competency Standards, which were endorsed by ANTA in December 1996.

From the early stages of this project, industries (mining and non-mining) were concerned with the correct implementation of the EEHA—Competency Standards. Through their representatives in the different Standards Australia Committees dealing with electrical equipment and installations in hazardous areas, they have indicated the appropriateness of and need for a specific Standards Committee to overview, endorse and monitor the implementation of such Standards in Australia and New Zealand.

As a result the Joint Committee P-012, EEHA—Competency Standards Advisory Panel was set up in 1998 to provide advice and assist the relevant bodies (industry, regulators and educators) in the continuous review of the Competency Standards, the preparation of the National Training Package (comprising all endorsed and non-endorsed components) and in monitoring its implementation, to assure that industry’s needs and requirements are met.

Increasingly, organizations and enterprises are seeking conformance certification for their products.* Certifying bodies are using Standards developed by internationally recognized bodies, such as Standards Australia/Standards New Zealand, as the basis for this product certification. Requirements for 'competent persons' have been introduced in Australian/New Zealand Standards dealing with electrical equipment for hazardous areas; this led to certifying bodies expressing the need for formal Standards against which conformance of competencies can be measured. To fulfil such need the Joint Committee P-012 has prepared this Series of Standards, based on the previous Interim Series issued on 8 June 2000.

For use in New Zealand training systems, an equivalent set of Unit Standards was prepared by the ElectroTechnology Industry Training Organization (ETITO) to match the requirements of the New Zealand Qualifications Framework. These Unit Standards represent the same underpinning knowledge and practical skills, and equivalence was endorsed by the Joint Committee P-012 on 4 May 1999. They are registered with the New Zealand Qualifications Authority under the domain *Electrical Equipment for Hazardous Areas*.

* Product may be either a tangible item or service, as defined in ISO/IEC Guide 65, *General requirements for bodies operating product certification systems*.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard**Competencies for working with electrical equipment for hazardous areas (EEHA)**

Part 2: Guide for training and assessment

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Part of the Standard provides a consolidation of the knowledge and skills that define the Units of Competency(AUS)/Unit Standards(NZ) described in Part 1. The knowledge and skills which have been derived from the Units of Competency(AUS)/Unit Standards(NZ) are in learning descriptors form, to assist in the development of structured training/learning and assessment programs.

1.2 APPLICATION

This Standard may be used by Training Providers to develop structured training/learning and assessment programs and by learners as a guide to the extent of knowledge and skills required to be deemed competent.

It may also be referenced by—

- (a) bodies certifying overhaul and repair workshops; and
- (b) enterprises in establishing competency of their personnel.

1.3 REFERENCED DOCUMENT

The following document is referred to in this Standard:

AS/NZS

4761 Competencies for working with electrical equipment for hazardous areas (EEHA)

4761.1 Part 1: Competency Standards

1.4 DEFINITIONS

For the purposes of this Part of the Standard the definitions in AS/NZS 4761.1 apply.