

Title	Demonstrate knowledge of managing hazardous atmosphere zones for flammable and oxidising substances		
Level	3	Credits	4

Purpose	<p>This unit standard is intended for people who are the certified handlers in their workplace, under the Health and Safety at Work (Hazardous Substances) Regulations 2017, and who are involved in the manufacture and use of hazardous substances.</p> <p>People credited with this unit standard are able to demonstrate knowledge of managing hazardous atmosphere zones and unintended ignition for flammable liquids, and managing unintended ignition, combustion and explosion for liquid desensitised explosives, flammable solids, and oxidising substances.</p>
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Classification	Occupational Health and Safety > Hazardous Substances and Materials
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Available grade	Achieved
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Guidance Information

1 References

Legislation applicable to this unit standard includes but is not limited to – Health and Safety at Work Act 2015; Health and Safety at Work (Hazardous Substances) Regulations 2017; Hazardous Substances and New Organisms Act 1996; AS/NZS 60079.10.1:2009 *Explosive atmospheres – Classification of areas – Explosive gas atmospheres*; AS/NZS 4745:2012 *Code of practice for handling combustible dusts*; AS/NZS 1596:2014 *The storage and handling of LP Gas*, AS/NZS 61241.0:2005 *Electrical apparatus for use in the presence of combustible dust – General requirements*, available at www.standards.co.nz.

2 Definitions

Certified handler – someone who is qualified to handle very hazardous substances. A certified handler may also provide guidance and assistance to other people handling the substances.

Hazardous atmosphere zones – an area surrounding a flammable substance location that identifies the extent of any source (or potential source) of release of gas or vapour. Within the zone there must be controls on ignition sources to prevent unintended ignition. The extent of the zone depends on the nature of the operation and quality of ventilation. The types of hazardous zones are identified as:

Zone 0 – Extreme risk

Zone 1 – High risk

Zone 2 – Low risk.

Hazardous substance – any substance that has one or more of the following properties (explosive, flammable, ability to oxidize, corrosiveness, toxicity, ecotoxicity) when above specified levels. A hazardous substance can have more than one hazardous property such as petrol which is flammable and toxic.

Organisational requirements – instructions to staff on policies and procedures which are documented in memo or manual format. These requirements include but are not limited to – site-specific requirements and any quality management requirements.

Standards and codes of practice – refer to AS/NZS 60079.10.1:2009.

- 3 Certified handlers are not responsible for classifying hazardous substances and it is not their responsibility or duty to draw/mark a hazardous zone on a site plan.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of managing hazardous atmosphere zones and unintended ignition for flammable liquids.

Performance criteria

- 1.1 Different types of hazardous atmosphere zones generated as a result of handling, storing, and using flammable liquids are identified and described in accordance with legislative requirements.
- 1.2 Standards and codes of practice that apply to hazardous atmosphere zones are identified and described in terms of their key requirements.
- 1.3 The process for marking a scaled hazardous atmosphere zone on a site plan and/or drawing is described in accordance with legislative and organisational requirements.
- 1.4 The process for managing hazardous atmosphere zones to avoid unintended ignition is described in accordance with industry standards, legislative and organisational requirements.

Outcome 2

Demonstrate knowledge of managing unintended ignition, combustion and explosion for liquid desensitised explosives, flammable solids, and oxidising substances.

Performance criteria

- 2.1 The process for managing the range of controls required to prevent unintended ignition, combustion and explosion for liquid desensitised explosives, flammable solids, and oxidising substances is described in accordance with industry standards, legislative and organisational requirements.

Range includes but is not limited to – temperature control, separation, segregation, limits on ignition sources.

Planned review date	31 December 2020
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 September 2011	N/A
Rollover and Revision	2	22 May 2014	N/A
Rollover and Revision	3	8 December 2016	N/A
Rollover and Revision	4	22 August 2019	N/A

Consent and Moderation Requirements (CMR) reference	0121
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact The Skills Organisation reviewcomments@skills.org.nz if you wish to suggest changes to the content of this unit standard.