

# Unexploded explosive ordnance (UXO) and munitions diving



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# Preface

This is the first edition of CSA Z275.6, *Unexploded explosive ordnance (UXO) and munitions diving*. It is part of a series of Standards on occupational diving, hyperbaric facilities, and work in compressed air environments.

The Department of National Defence (DND) in consultation with the Canadian Standards Association has identified a need for the commercial diving industry to have the same guidance and protection when conducting diving operations involving unexploded explosive ordnance (UXO) as it has when conducting any other type of underwater work. For the purposes of this Standard, UXO includes munitions, munitions components, and munitions debris of a non-influence nature. This Standard has been endorsed by DND as it is designed to provide an appropriate level of assurance for safety and competency in connection with contracting for underwater UXO work. It is based on existing CSA Standards and DND UXO policies.

This Standard has been harmonized with the basic operational requirements of CSA Z275.2, *Occupational safety code for diving operations*. Specialized UXO diving requirements for training and competency in this Standard are intended to augment the basic training and competency requirements in CAN/CSA-Z275.4, *Competency standard for diving operations*, and CSA Z275.5, *Occupational diver training*.

This Standard is not intended to supersede the requirements of applicable occupational health and safety regulations. The requirements of this Standard have been written in a manner that allows the user to comply with both this Standard and applicable legislated requirements throughout Canada.

This Standard is not intended for use as a diving or procedure manual. It has been written to be inflexible in matters that experience has shown to be critical to the safety of the diver, but flexible in areas where the responsibility and considered judgment of operators provide the highest degree of safety in specialized operations.

Canadian occupational health and safety legislation requires that all workers be competent to perform the work assigned to them. Workers involved in UXO diving operations require competency in the application of UXO equipment and procedures as well as in the theory and use of the diving apparatus employed in UXO diving operations. This Standard has been established to provide the diving industry with the uniform minimum levels of competency necessary for the various levels of UXO diving and with specific procedures for UXO diving operations. These levels of competency, combined with the necessary techniques, will allow divers and support personnel to safely and competently complete UXO diving tasks. As specified in this Standard, divers, tenders, and diving supervisors engaged in UXO diving are required to hold a certificate of occupational diving competency, for the appropriate category, issued by a nationally recognized certifying agency or other body recognized by the authority having jurisdiction.

**Note:** *At the time of publication of this Standard, the nationally recognized certifying agency in Canada is the Diver Certification Board of Canada (DCBC).*

This Standard was prepared by the Subcommittee on UXO and Explosive Devices Diving Operations, under the jurisdiction of the Technical Committee on Occupational Diving and Hyperbaric Environments and the Strategic Steering Committee on Occupational Health and Safety, and has been formally approved by the Technical Committee.

August 2011

## Notes:

- (1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- (2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
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  - (d) rationale for the change.



# Z275.6-11

## ***Unexploded explosive ordnance (UXO) and munitions diving***

### **1 Scope**

#### **1.1 General**

This Standard applies to occupational diving operations conducted in connection with unexploded explosive ordnance (UXO) and specifies minimum competency level requirements for all personnel directly associated with the techniques of UXO diving identified in this Standard and additional requirements for occupational safety during UXO diving operations.

#### **1.2 UXO diving competencies**

##### **1.2.1**

This Standard specifies competency requirements for

- (a) occupational (open-circuit) self-contained underwater breathing apparatus (SCUBA) diving; and
- (b) surface-supplied diving, as follows:
  - (i) restricted, surface-supplied;
  - (ii) unrestricted, surface-supplied; and
  - (iii) mixed gas.

##### **1.2.2**

This Standard specifies competency requirements for the following personnel associated with the diving techniques specified in [Clause 1.2.1](#) as they relate to UXO diving:

- (a) UXO SCUBA diver (see [Clause 5](#));
- (b) UXO SCUBA tender (see [Clause 6](#));
- (c) UXO SCUBA supervisor (see [Clause 7](#));
- (d) UXO restricted surface-supplied diver (see [Clause 8](#));
- (e) UXO surface-supplied tender (see [Clause 9](#));
- (f) UXO restricted surface-supplied supervisor (see [Clause 10](#));
- (g) UXO unrestricted surface-supplied diver (see [Clause 11](#));
- (h) UXO unrestricted surface-supplied supervisor (see [Clause 12](#));
- (i) UXO surface-supplied mixed-gas diver (see [Clause 13](#));
- (j) UXO surface-supplied mixed-gas tender (see [Clause 14](#)); and
- (k) UXO surface-supplied mixed-gas supervisor (see [Clause 15](#)).

**Note:** *These categories of occupational diving personnel correspond with the categories of occupational diving personnel specified in CAN/CSA-Z275.4, but with the addition of the prefix "UXO" to identify the additional endorsement of UXO diving competency as specified in this Standard.*

#### **1.3 Dual dimensions**

The values given in SI units are the units of record for the purposes of this Standard. The values given in parentheses are for information and comparison only.