



CMAS

BOARD OF DIRECTORS VISA N°223

1. AIM OF THE TRAINING PROGRAMME

- 1.1. The CMAS Oxygen Administration Training Programme aims to train CMAS divers to recognise the signs and symptoms of diving injuries and to provide first aid with Oxygen to an injured diver.

2. CLASSIFICATION

- 2.1. The CMAS Oxygen Administration Training Programme is classified as an entry-level speciality diver training programme.

3. INSTRUCTOR AND ASSISTANT REQUIREMENTS

- 3.1. The CMAS Oxygen Administration Training Programme may be presented by any CMAS Instructor with a minimum of a CMAS One Star Instructor grading that holds a CMAS Oxygen Administration certification and with the requirements of his National Federation to teach and to authorize the issuance of CMAS Oxygen Administration certifications.
- 3.2. The CMAS one Star Instructor must be assisted by a minimum Dive Leader (i.e. a CMAS Three Star Diver or a CMAS Divemaster that holds a CMAS Oxygen Administration certification and complies with the requirements of the national federation).

4. TRAINING PROGRAMME STRUCTURE AND DURATION

- 4.1. The CMAS Oxygen Administration Training Programme consists of the following two (2) Sections:
 - 4.1.1. **KNOWLEDGE DEVELOPMENT SECTION:** The minimum is 4 hours
 - 4.1.2. **PRACTICAL SKILLS DEVELOPMENT SECTION:** The minimum is 3 hours
 - 4.1.3. **COURSE RESULTS:** This certification expires three (3) years from the date completion of the course.
- 4.2. The CMAS Instructors must verify state and local regulations to ensure that this training programme is not prohibited by the national federation law and any minimum age requirement or equipment limitations.

5. COMPETENCIES OF A CERTIFIED CMAS OXYGEN PROVIDER

- 5.1. A CMAS Oxygen Provider shall be trained such that when assessed by a CMAS Instructor, he shall be deemed to have sufficient knowledge, skill and experience to provide basic life support and to administer oxygen to a diving casualty during a diving emergency without the supervision of a CMAS Instructor or CMAS DiveMaster, when properly equipped with oxygen administration equipment.
- 5.2. A CMAS Oxygen Provider is qualified, subject to any legislation in the country where the training programme is presented:
 - To prepare oxygen administration equipment for emergency use;
 - To conduct an immediate general assessment and to perform a primary assessment on a diving casualty;
 - To provide Basic Life Support to a diving casualty; and

CMAS OXYGEN ADMINISTRATION STANDARD

- To provide oxygen to a diving casualty by means of various oxygen administration techniques.
- The parameters within which the CMAS Oxygen Provider is qualified to dive are those applicable to the other diver training certifications he already holds.

6. LIMITATIONS OF THE CMAS OXYGEN ADMINISTRATION CERTIFICATION

- 6.1. The CMAS Oxygen Administration certification only qualifies the participant to provide supplemental oxygen to a diving casualty as the provision of supplemental oxygen to other casualties without proper medical training and/or supervision could lead to unintended complications.
- 6.2. As medical oxygen is regarded as a controlled substance in many countries around the world the provision of oxygen to a diving casualty in a specific country will be subject to the applicable legislation in that specific country.
- 6.3. The CMAS Oxygen Administration certification has a validity period of two (2) years from the date of issue. This means that the holder of the certification is required to attend a refresher training programme within six (6) months after the expiry date of his certificate, failing which he is required to redo the entire training programme.

7. PREREQUISITES FOR PARTICIPATION IN THE TRAINING PROGRAMME

- 7.1. To gain access to the CMAS Oxygen Administration Training Programme the participant shall:
 - 7.1.1. Be at least 14 years of age (Parental or legal guardian approval is required when the participant is a minor).
 - 7.1.2. Sign the appropriate form(s) as required by the National Federation acknowledging and assuming the risks of participating in the training programme as well as for the notice and consent for the collection of the participant's personal information. (Parental or legal guardian signature is required on the appropriate form(s) when the participant is a minor).

8. EXPERIENCE / KNOWLEDGE/CERTIFICATION

- 8.1. No prior diving knowledge, skills or experience is required.

9. RATIO Participant/ INSTRUCTOR

ACTIVITY	MAXIMUM PARTICIPANTS	INSTRUCTOR	NUM. MANKINS
THEORY	12	1	2
PRACTICAL APPLICATION	12	1	2
+ 1 ASSISTANT	18	2	3
+ 2 OR MORE ASSIST	24	3	4

- 9.1. The number of participants in a practical application session with assistants will depend on the number CPR sets and manikins available.

10. REQUIREMENTS FOR CERTIFICATION

10.1. To be awarded a CMAS Oxygen Administration certification, the participant shall:

- Successfully complete the theoretical assessment of this standard.
- Successfully complete the practical application assessment of this standard.

11. REQUIRED THEORETICAL AND PRACTICAL TRAINING KNOWLEDGE

11.1. REQUIRED EQUIPMENT AND SUPPLIES

- Oxygen Administration equipment suitable to provide oxygen to a diving casualty (Oxygen (O₂) cylinder with regulator and oro-nasal demand valve face mask and the oro-nasal pocket mask)
- Nitrox cylinder with regulator oxygen clean
- Adult CPR manikin
- Barriers and personal protection equipment

11.2. OXYGEN AND THE DIVER

11.2.1. The participant shall have an appropriate knowledge of the gas "oxygen" including the following:

- What is oxygen? (description and characteristics)
- Overview of the benefits of breathing high oxygen concentrations in the treatment of diving disorders.

11.3. ANATOMY AND PHYSIOLOGY

11.3.1. The participant shall have an appropriate knowledge of the human anatomy as it relates to oxygen administration, including the following:

- The heart
- The thorax
- The circulatory system
- The lungs

11.3.2. The participant shall have an appropriate knowledge of the human physiology as it relates to oxygen administration, including the following:

- Mechanism of breathing
- Control of breathing
- Lung functions
- Gas transport
- Hypoxia and shock

11.4. DIVING DISORDERS AND OXYGEN THERAPY

11.4.1. The participant shall have an appropriate knowledge of the causes, signs and symptoms, on-site first aid measures and the benefits of oxygen administration for the following diving disorders:

- Shock
- Decompression sickness
- Pulmonary barotrauma
- Arterial gas embolism
- Near drowning
- Carbon monoxide toxicity

11.5. THE EXAMINATION OF A DIVING CASUALTY

11.5.1. The participant shall have an appropriate knowledge of the diving casualty assessment technique in order to identify and treat any life-threatening conditions that may be endangering the life of the diving casualty before oxygen can be provided to him.

11.5.2. The technique would include the following:

- The immediate general assessment hazards.
- The Primary Assessment (Airway, Breathing and Circulation)

11.6. BASIC LIFE SUPPORT TECHNIQUES

11.6.1. The participant shall have an appropriate knowledge of the following Basic Life Support techniques:

- The rescue breathing technique
- Rescue breathing with a pocket mask
- One rescuer CPR technique
- Two rescuer CPR technique
- Complications when resuscitating a diving casualty

11.7. OXYGEN ADMINISTRATION EQUIPMENT

11.7.1. The participant shall have an appropriate knowledge of the following oxygen administration equipment suitable for the treatment of a diving casualty:

- Oxygen cylinders and valves
- The pressure regulator
- The connecting hoses
- Oxygen delivery masks, including the oro-nasal demand valve face mask and the oro-nasal pocket mask
- Watertight protective case

11.7.2. The participant shall have an appropriate knowledge of the preparation of oxygen administration equipment for emergency use.

11.8. OXYGEN ADMINISTRATION TECHNIQUES

11.8.1. The participant shall have an appropriate knowledge of the following techniques of providing oxygen to a breathing diving casualty:

- Oxygen administration via a demand system to a conscious breathing diving casualty.
- Oxygen administration via a constant flow pocket mask to conscious breathing diving casualty.
- Oxygen administration via a demand system to an unconscious breathing diving casualty.
- Oxygen administration via a constant flow pocket mask to an unconscious breathing diving casualty.

11.8.2. The participant shall have an appropriate knowledge of the following techniques of providing oxygen to a non-breathing diving casualty:

- Oxygen administration via a constant flow pocket mask to an unconscious, non-breathing diving casualty.
- Oxygen administration via a demand system to an unconscious, non-breathing diving casualty.

11.9 SPECIAL CONSIDERATIONS FOR OXYGEN PROVIDERS

11.9.1. The participant shall have an appropriate knowledge concerning the problems associated with oxygen administration, including the following:

- Regulation and laws
- Limitations of oxygen therapy
- Dangers in the use of Entonox in the treatment of diving disorders
- Rescuer health and safety

12. ASSESSMENT

12.1. KNOWLEDGE

12.1.1. The participant shall demonstrate to the CMAS One star Instructor knowledge of administration oxygen principles and practices by taking and passing an oral and/ or written examination. This examination shall test oxygen provider theoretical knowledge according to required theoretical and practical training knowledge of this standard.

12.2. PRACTICAL APPLICATION

12.2.1. The participant shall demonstrate to the CMAS One star Instructor his mastery of the oxygen administration and to be able to administer to an unconscious, non-breathing diving casualty.

13. CERTIFICATION

13.1. Upon successful completion of the training programme, the participant shall be awarded a CMAS Oxygen Administration C-card.