



Safe cave diving training with Swiss Cave Diving Instructors

Directives for the use of O₂, Nitrox, Trimix, Rebreathers, Stage Tanks and DPVs during Cave Diving Courses

General

The rapid development in the area of sport diving in relation to the usage of special gas mixtures and rebreather didn't stop in cave diving.

However, for legal and technical reasons it is compulsory to control and regulate the use of such technology during the training courses within reasonable limits.

*The following rules and regulations are compulsory for all participants of SCD cave diving seminars and courses and are an integrated part of the subscription. **Violation of those rules by the participants will lead to expulsion without any financial compensation.***

1. Usage of stage tanks (all types)

- from a penetration distance of 500m or more without the possibility to re-surface, a 3rd tank has to be carried with (stage tank, 3 tank rig) or to be deposited on a suitable place.
- minimum size for this tank is 7 litres. The rule of thirds (or a more constraining one) has also to be applied to this tank.
- all tanks must be equipped with one complete regulator rig (incl. pressure gauge).
- all tanks that may be deposited somewhere in the cave during the dive have to be clearly marked with the name of the user.
- additionally, all tanks containing other gases than air must carry a gas-tag and the MOD written in big sized numbers (approx. 8-10cm / 4 in.) directly on the tank (ref. to pt. 8)

2. Stage decompression with 100% oxygen

- prerequisite is Advanced Nitrox Certificate
- usage is accepted also during training courses (Cave Diver 2 and above)
- maximum operation depth: 6m/20ft
- quality: oxygen 2.5
- only noninterchangeably marked O₂-tanks are permitted; minimal size is 800 bar*litres
- each tank must carry a 100% O₂-compatible regulator and a submersible pressure gauge
- divers who do not own a diving computer that allows for gas switches underwater must apply the decompression stop times for air or the used Nitrox mixture.

3. Usage of Nitrox

- prerequisite is Nitrox-Diver Certificate
- Nitrox-compatible dive computer required
- for MOD: max. pO₂ as set forth by law, in the regulations of the national federation (CMAS.CH) or by CMAS International.
- no dive with a tank whose content has not been personally analyzed !
- all tanks must be properly marked as required under point 8.

4. Usage of Trimix

- the use of Trimix is governed by a special set of safety rules. To be requested from the organizer.



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5. Usage of Scooters (DPVs: Diving Propulsion Vehicles)

- the use of underwater scooters is governed by a special set of safety rules. To be requested from the organizer.

6. Usage of rebreathers and similar equipment

- is not to be used within the framework of all our seminars.

7. Blending of gas mixtures

- As a general rule, all participants fill their tanks themselves, regardless of their content. Thus everybody is fully responsible for him-/herself for it and for the correct use of the mixture.
- After each blending and filling, the blender has to analyze the content. This measurement has to be repeated *before* the briefing at the diving-site!
- The organizers reserve the right to control the indicated contents at any time w/o prior notice.

8. Marking O₂-, Nitrox- and Trimix-Tanks

- all such tanks have to be clearly marked in readable writing with the name of the user
- O₂ tanks have to be properly stamped. Painting of outside tank walls has to be according to colour code as set forth by national laws or international agreements. Additionally, O₂ tanks must also carry a distinctive writing ("O₂"/"Oxygen"/"Sauerstoff")
- all such tanks have to be properly and clearly marked with the usual O₂/ EAN / NITROX / TRIMIX stickers/tags.
- the actual content has to be indicated on a good readable content sticker/tag:
 - once more type of gas (EANx, Tmx)
 - display of fraction %O₂ / % N₂ / %He. This analysis has to be done by the blender after the blending process is finished and once more at the dive site by the user
 - MOD (maximum operation depth) in meters with indicating the used units
 - [optional: EAD (Equivalent Air Depth in meters)]
 - filling date / date of analysis
 - signature of the blender / of the person who made the tank content analysis
- in addition to this easily removable tag it is recommended to write the MOD in big size numbers (approx. 8-10cm / 3-4 in.) directly on the tank

9. O₂-Compatibility of tanks, valves and regulators

- Up to a content of 40%O₂ , no special manifolds or valves are requested
- Inner walls of the tanks, manifolds and valves and the regulators have to be 100% O₂-compatible according to the corresponding regulations and laws. This is the task of the user (cleaning, use of correct grease). Each user carries the full responsibility alone. This holds true even more if pure O₂ is decanted during the blending process !
- All maintenance and trouble shooting of regulators and all other personal equipment is in the sole responsibility of each participant.

10. Additional costs

All costs for breathing gases other than air are to be paid separately by each participant and are NOT included in the course fees.

Attention: On request, the organizers are procuring and offering *medical* O₂ on-site.