



REBREATHERS



456 Creamery Way · Exton, PA 19341 · USA

**PRODUCT NOTICE**  
**OXYGEN-BASED, CLOSED-CIRCUIT RESPIRATOR USE**  
**IN**  
**HIGH-PRESSURE ATMOSPHERES**

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**The use of oxygen-based, closed-circuit respirators in applications pressurized 1-atmosphere above atmospheric pressure (1-atmosphere gage pressure) will pose a high risk of user injury or death.**

At pressures 1-atmosphere above standard atmospheric pressure (1-atmosphere gage pressure) oxygen toxicity will increase dramatically and will cause user convulsions and death. Any application that places the user in pressurized situations is no different than diving applications and will require the use of a mixed gas breathing apparatus. Atmospheric pressures 2-atmospheres above standard pressure (2-atmosphere gage pressure) will induce user oxygen toxicity within 5-10 minutes while pressures greater than 2-atmospheres gage pressure will induce user oxygen toxicity within minutes if not immediately.

Thus due to the threat of injury and death from oxygen toxicity:

**AN OXYGEN-BASED, CLOSED-CIRCUIT RESPIRATOR IS NOT SUITABLE FOR USE IN APPLICATIONS THAT WILL PLACE THE USER IN PRESSURES GREATER THAN 1-ATMOSPHERE ABOVE STANDARD ATMOSPHERIC PRESSURE.**

Manuals supplied with BioPak products either state that the BioPak is suitable for diving to 1-atmosphere pressure or, in the case of the BioPak 240R, state that the device is not suitable for diving applications. This warning is supplied due to the effects of oxygen toxicity and shall be applicable to all situations of pressure above 1-atmosphere whether in a diving or pressurized atmosphere situation.

The chart provided below provides a listing of average atmospheric pressures at depths below sea level but NOT SUBMERGED under water. This chart demonstrates that the BioPak is suitable for deep mine use.

**Note:** 1 atm = 14.7 psi

Depth Below Sea Level		Gage Atmospheric Pressure
feet	meter	atm
SEA LEVEL		0.00
2,000	610	0.07
4,000	1,219	0.15
6,000	1,829	0.23
8,000	2,438	0.31
10,000	3,048	0.40