

# GENERAL INFORMATION ON

# Oxygen SAFETY

Oxygen deficiency and oxygen enrichment in any confined space may not be noticeable, but that does not mean it isn't dangerous. Failing to properly monitor spaces that are using or storing hazardous gases could lead to severe health and fire hazards. It's important to prioritize gas detection safety monitoring, to safeguard yourself and employees as well as properly understand the hazard when working near dangerous gases.

## O2 SAFETY STANDARDS



### CGA G-4.1-2018

Any surface or environment that encounters oxygen concentration higher than **23.5%** should adhere to the cleaning standards promoted.



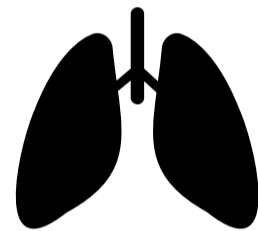
### 29 CFR 1910.101

Standards are set for the handling, use, and storage of compressed gas cylinders in applications other than welding and cutting.



An oxygen deficient atmosphere is further defined as any environment that holds less than 19.5% available oxygen. This environment is noted to not be entered without an approved oxygen safety monitor or self-contained breathing apparatus.

## PHYSICAL SYMPTOMS



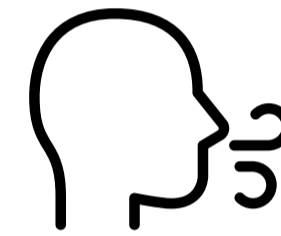
19.5% - 11%

Increased breathing, accelerated heart rate, impaired thinking



10% - 6%

Nausea, vomiting, lethargy, leading to unconsciousness



< 6%

Convulsions, cessation of breathing, coma, and fatalities



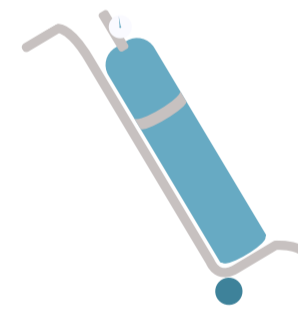
19.5%

\*Minimum "safe level" per OSHA and often the low level alarm of most O2 detectors\*

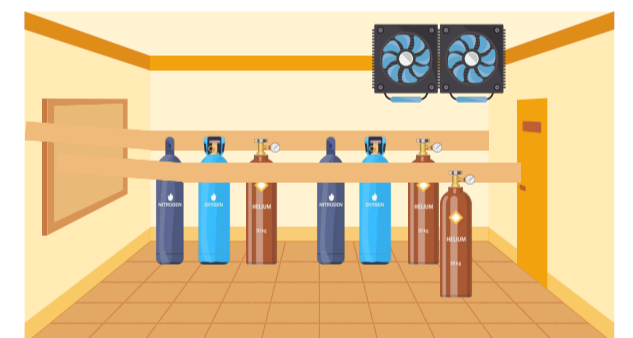
## HAZARD AREAS



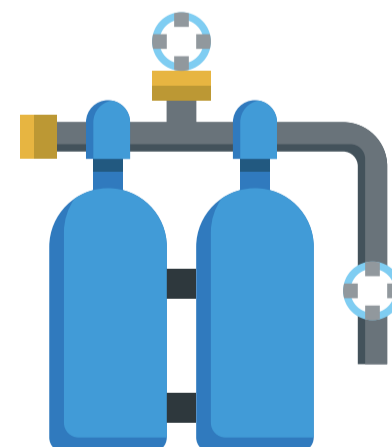
Anywhere hazardous gases or "Liquid Nitrogen/Liquid Helium is stored or used



Areas where compressed gases are transported or used



Rooms containing tanks of stored gases such as laboratories, food production facilities, and cryogenic chambers.



Venting from Cryogenic Gas Cylinders



Oxygen use in cutting and welding

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