



Month Topic: ASPHYXIATION – “Oxygen Depletion”

- **Asphyxiation** – also known as suffocation, a condition of a severely deficient amount of oxygen supply to the body that can lead to unconsciousness and even death
- Oxygen deficiency can arise when using or working in an environment that contains gases like nitrogen, argon, helium, neon, and carbon dioxide.
- Inert gases are non-toxic, non-flammable gases but can be extremely dangerous as they are undetectable due to their odorless, colorless, and tasteless characteristics.



Inert gases displace oxygen and thus can lead to little or no oxygen supply. Comparatively toxic gases can be detected by their odor at very low concentrations and give an early warning sign.

- Oxygen is essential to life and the normal concentration is 20.9% of the air we breathe.
- Historically canaries and candles were used as safety devices to monitor oxygen in potential dangerous environments.

O ₂ (Vol %)	Effects and Symptoms
18-21	No discernible symptoms can be detected by the individual. A risk assessment must be undertaken to understand the causes and determine whether it is safe to continue working.
11-18	Reduction of physical and intellectual performance without the sufferer being aware .
8-11	Possibility of fainting within a few minutes without prior warning. Risk of death below 11%.
6-8	Fainting occurs after a short time. Resuscitation possible if carried out immediately.
0-6	Fainting almost immediate. Brain damage , even if rescued.

Macurco Gas Products Gas in the News Learn More

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| <ul style="list-style-type: none"> • Commercial OX-6 Detector • Commercial OX-12 Detector • Portable OX-1 Detector • Other Gas Products | <ul style="list-style-type: none"> • Brewery Accident • Close Quarters • Nitrogen Factory Accident • Argon Welding Accident | <ul style="list-style-type: none"> • Inert Gases & O2 Depletion • The Silent Killer • Safety Bulletin • Manhole Safety |
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Applications

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| <ul style="list-style-type: none"> ✓ Hospitals ✓ Tanks ✓ Vessels ✓ Waste water treatment plants ✓ Factories ✓ Cold Storage Rooms ✓ Storage Sheds | <ul style="list-style-type: none"> ✓ Tunnels ✓ Manholes ✓ Sub cellars ✓ Silos ✓ Open Ditches ✓ Ship Holds ✓ Laboratory Rooms | <ul style="list-style-type: none"> ✓ MRI Rooms ✓ Pits ✓ Hoppers ✓ Pharmaceuticals ✓ Industrial Chemical Plants ✓ Food Industry ✓ Welding Applications |
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