



Critical Environment Technologies

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PROPERTIES OF GASES

All substances have a molecular weight determined by the number and type of atoms in the molecule. In a gaseous state, the larger and heavier the molecule, the heavier the gas is.

Molecular weight of some common gases:

Air	29
Carbon Monoxide - CO	28
Carbon Dioxide - CO ₂	44
Ammonia - NH ₃	17
Hydrogen - H ₂	2
Methane - CH ₄	16
Propane - C ₃ H ₈	44
Oxygen - O ₂	32
Ozone - O ₃	48
Chlorine - Cl ₂	71
Nitric Oxide - NO	30
Nitrogen Dioxide - NO ₂	46
Hydrogen Sulphide - H ₂ S	34
Refrigerants	90 - 150

Gases mix and diffuse readily, so a good default location for gas sensors is in the 'breathing zone' 4 to 6 feet from the floor.

Heavier than air gases should be detected near the floor, lighter than air gas sensors should be placed on or near the ceiling.