

Vapor Densities

Different gases have different vapor densities which determine where those gases might be found in the confined space. Good monitoring practice says that you monitor at all levels of a space, but if you know what gases might be present, you should take special care to check at that level. The vapor density number indicates how light or heavy the gas is in relation to air. Hydrogen has a low vapor density, so it will migrate to the top of a space. Sulfur dioxide is a dense, heavy gas that would be found at the bottom of a space. The vapor density of a contaminant will also help determine where the end of the duct will be placed in the space for ducted exhaust ventilation.

Vapor Densities of Common Gases

| Gas | | Vapor Density |
|------------------|------------------|---------------|
| Hydrogen | H ₂ | 0.0695 |
| Methane | CH ₄ | 0.5540 |
| Carbon Monoxide | CO | 0.9680 |
| Air | | 1.0000 |
| Hydrogen Sulfide | H ₂ S | 1.1912 |
| Carbon Dioxide | CO ₂ | 1.5270 |
| Sulfur Dioxide | SO ₂ | 2.2638 |