

Mine Gas Chart

Name of Gas	Symbol	Common Name	Spec. Gravity	Source or Cause Where Found	Effect On Life	How Detected	Explosive	Combustible	Characteristics	Remarks
Carbon Dioxide	CO ₂	Black Damp	1.52	Respiration of men And animals; fire	May displace Oxygen	Multi-Gas Detector	NO	NO	colorless, odorless, tasteless in low conc.	TLV 0.05% for 8 hours
Carbon Monoxide	CO	White Damp	0.967	From incomplete Combustion, blasting, & diesel exhaust	Poisonous	CO Detector	YES	YES	Colorless, odorless, tasteless, poisonous	TLV 0.005%; 50 ppm – 8 hours
Nitrogen	N ₂	Nitrogen	0.967	Normal constituent of air	Will not Support life	Chemical analysis	NO	NO	Colorless, odorless, tasteless	78% of air
Hydrogen	H ₂	Hydrogen	0.069	Battery charging stations; incomplete combustion in mine fires	no harmful effects with O ₂ present	Methanometer or special lab testing	YES	YES	Colorless, odorless, tasteless	Explosive range: 4.1 – 74%
Oxides of Nitrogen	N ₂ O N ₂ O ₂ NO _x etc.	Oxides of Nitrogen	1.59	Blasting fumes, diesel exhaust	Toxic, causes edema of the lungs	Multi-Gas Detector	NO	NO	Red-brown in high conc., tasteless, poisonous	TLV 0.0005%, 5 ppm anytime
Methane	CH ₄	Fire Damp	0.555	Sewage, decaying plants or animals; coal seams	No harmful effects with O ₂ present	Methanometer Or Flame Safety Lamp	YES	YES	Colorless, odorless, tasteless	Explosive range: 5 – 15%
Hydrogen Sulfide	H ₂ S	Stink Damp	1.19	Decomposition of some sulfur ores; stagnant water ponds	Sense of smell deadened; paralyze resp. system	Rotten egg odor or multi gas detector	YES	YES	Poisonous, colorless, smell of rotten eggs, irritating	Expl. range 4.3-45%, TLV 0.001%, 10 ppm
Oxygen	O ₂	Oxygen	1.105	Atmosphere	Essential to Life	O ₂ detector or Flame Safety Lamp	NO	NO	Colorless, odorless, tasteless	Supports combustion