

## Quick Guide: Hazardous Materials

Product	Leak Type	Vapors	Health Hazards
Highly volatile liquids such as butane, propane, ethane, propylene and natural gas liquids	Gas	Initially heavier than air, spread along ground and may travel to source of ignition & flash back.	Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating and/or toxic gases.
Natural Gas	Gas	Lighter than air and will generally rise and dissipate.	Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
Flammable gases such as acetylene, butadiene, and ethylene	Gas	Vapors from liquefied gas are initially heavier than air, spread along ground and may travel to source of ignition and flash back.	Will be easily ignited by heat, sparks or flames and will form explosive mixtures with air. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled at high concentrations. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating and/or toxic gases.
Carbon Dioxide (CO <sub>2</sub> )	Gas	Vapors from liquefied gas are initially heavier than air, spread along ground.	Product is a simple asphyxiant and non-flammable. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
Nitrogen	Gas	Initially heavier than air, spread along ground and may travel to source of ignition and flash	Product is a simple asphyxiant and non-flammable. Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
Oxygen	Gas	Lighter than air and will rise.	Vapors may cause dizziness or asphyxiation without warning and may be toxic if inhaled. Prolong exposure to oxygen will effect the respiratory system and may cause breathing difficulty, headache, dizziness and drowsiness.
Ammonia	Gas	Vapors are lighter than air and will generally rise & dissipate. In presence of moisture, vapors become heavier than air and may spread along ground	Vapors are toxic and may be fatal if inhaled, ingested or absorbed through skin. Vapors are extremely irritating and corrosive. Contact with gas may cause burns, severe injury and/or frostbite.

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Hazardous liquids such as crude oil, diesel fuel, jet fuel, gasoline, and other refined products	Gas	Initially heavier than air and spread along ground and collect in low and confined areas. Vapors may travel to source of ignition and flash back. Explosion hazard indoors, outdoors and sewers.	Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution.
Methanol	Gas	Vapors from liquefied gas are initially heavier than air, spread along ground and may travel to source of ignition and flash back.	Toxic, may be fatal if inhaled, ingested or absorbed through skin. Inhalation or contact will irritate or burn skin and eyes. Fire will produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. Runoff to sewer may create fire or explosion hazard.
Carbon Monoxide	Gas	Vapors from liquefied gas are initially heavier than air, spread along ground. Vapors may travel to source of ignition and flash	Toxic, may be fatal if inhaled, ingested or absorbed through skin. Contact may cause burns, severe injury and/or frostbite. Fire will produce irritating, corrosive and/or toxic gases. Flammable may be ignited by heat, sparks or flames. Runoff from fire control or dilution water may cause pollution.