

Hazardous Atmospheres

(for reference only)

Hazardous atmospheres are divided into three general classes and two divisions:

CLASS I:

Flammable gases or vapors

CLASS II:

Combustible dusts

CLASS III:

Ignitable fibers or flyings

DIVISION 1:

Hazard exists under normal conditions

DIVISION 2:

Hazardous material is handled, processed or stored. Hazard is not normally present, but may be released due to accident or equipment malfunction.

CLASS I:

Flammable Gases or Vapors

CLASS I, GROUP A:

- Acetylene

CLASS I, GROUP B:

- Acrolein (inhibited)
- Arsine
- Outadiene
- Ethylene oxide
- Hydrogen
- Manufactured gases containing more than 30% hydrogen by volume
- Propylene oxide
- Propyl nitrate

CLASS I, GROUP C:

- Acetaldehyde
- Allyl alcohol
- N-butyraldehyde
- Carbon monoxide
- Crotonaldehyde
- Cyclopropane
- Diethyl ether
- Diethylamine
- Epichlorohydrin
- Ethylene
- Ethylenimine
- Ethyl mercaptan
- Ethyl sulfide
- Morpholine
- 2-nitropropane
- Tetrahydrofuran
- Unsymmetrical dimethyl hydrazine
- (UMDH 1, 1-dimethyl hydrazine)

CLASS I, GROUP D:

- Acetic acid
- Acetone
- Acrylonitrile
- Ammonia
- Benzene
- Butane
- 1-butanol (butyl alcohol)
- 2-butanol (secondary butyl alcohol)
- N-butyl acetate
- Isobutyl acetate
- Di-isobutylene
- Ethane
- Ethanol (ethyl alcohol)
- Ethyl acetate
- Ethyl acrylate (inhibited)
- Ethylene diamine (anhydrous)
- Ethylene dichloride
- Ethylene glycol monomethyl ether
- Gasoline
- Heptanes
- Hexanes
- Isoprene
- Isopropyl ether
- Mesityl oxide
- Methane (natural gas)
- Methanol (methyl alcohol)
- 3-methyl 1-butanol (isoamyl alcohol)
- Methyl ethyl ketone
- 2-methyl 1-propanol (isobutyl alcohol)
- 2-methyl 2-propanol (tertiary butyl alcohol)
- Petroleum naphtha
- Pyridine
- Octanes
- Pentanes
- 1-pentanol (amyl alcohol)
- Propane
- 1-propanol (propyl alcohol)
- 2-propanol (isopropyl alcohol)
- Propylene
- Styrene
- Toluene
- Vinyl acetate
- Vinyl chloride
- Xylenes

CLASS II:

Combustible Dusts

CLASS II, GROUP E:

Atmospheres containing:

- Aluminum, magnesium or their commercial alloys
- Metals of similarly hazardous characteristics with a resistivity of 100 ohm per centimeter

CLASS II, GROUP F:

Atmospheres containing:

- Carbon black, charcoal, coal or coke dusts containing more than 8 percent total volatile material
- Dusts sensitized by other materials, presenting an explosion hazard and having a resistivity greater than 100 ohm per centimeter and equal to or less than 100 megohm per centimeter

CLASS II, GROUP G:

Atmospheres containing:

- Flour
- Starch
- Grain
- Combustible plastics or chemical dusts having resistivity greater than 1 megohm per centimeter

CLASS III:

Ignitable Fibers or Flyings

Atmospheres containing:

- Rayon
- Cotton
- Other textiles

Combustible fiber manufacturing and processing plants such as:

- Cotton gins
- Cottonseed mills
- Flax processing plants
- Clothing manufacturing plants
- Sawmills
- Other woodworking locations

Easily ignitable fibers including:

- Rayon
- Cotton (including cotton linters and cotton wastes)
- Sisal or henequen
- Istle
- Jute
- Hemp
- Tow
- Cocoa
- Oakum
- Baled waste kapok
- Spanish moss
- Excelsior
- Sawdust
- Wood chips