

## 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:** (d)  
acetylene

### CLASS I, GROUP B:

 (d)

acrolein (inhibited)  
arsine  
butadiene  
ethylene oxide  
hydrogen  
manufactured gases containing more than 30% hydrogen by volume  
propylene oxide  
propyl nitrate

### CLASS I, GROUP C:

 (c, d)

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:

 (c, 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** (c)

### CLASS II, GROUP E

 (c, d)

Atmospheres containing metal dust, including aluminum, magnesium, and their commercial alloys, as well as other metals of similarly hazardous characteristics with a resistivity of 100 ohms per centimeter.

### CLASS II, GROUP F

 (c, d)

Atmospheres containing carbon black, charcoal, coal or coke dusts that have more than 8 percent total volatile material, or atmospheres containing these dusts sensitized by other materials so that they present an explosion hazard. They will also have a resistivity greater than 100 ohms per centimeter and equal to or less than 100 megohms per centimeter.

### CLASS II, GROUP G

 (c, d)

Atmospheres containing flour, starch or grain as well as combustible plastics or chemical dusts having resistivity greater than 1 megohm per centimeter.

### CLASS III:

**Ignitable Fibers or Flyings** (c, d)

Atmospheres containing parts of rayon, cotton and other textiles. Combustible fiber manufacturing and processing plants such as cotton gins, cottonseed mills, flax processing plants, clothing manufacturing plants, sawmills and 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 and other similar materials.