

## 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

xylene

### 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 and flyings include 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.

(d) Rice Lake Weighing Systems' intrinsically safe systems may be used in these atmospheres.