



Hazardous Locations Reference

The following tables are based on NFPA 497M-1983

Class I - Gases or Vapors

Division 1 - Hazardous vapors present

Division 2 - Hazardous vapors contained, but may be present

Groups for both Division 1 and Division 2:

Group A - Atmospheres containing acetylene

Group B - Atmospheres containing hydrogen or gases or vapors of equivalent hazard such as manufactured gas

Group C - Atmospheres containing ethyl-ether vapors, ethylene or cyclo-propane

Group D - Atmospheres containing gasoline, hexane, naphtha, benzene, butane, propane, alcohol, acetone, benzol, lacquer solvent vapors, or natural gas

Class II - Dust

Division 1 - Air suspended

Division 2 - Surface accumulated, non-air suspended

Groups for both Division 1 and Division 2:

Group E - Atmospheres containing metal dust including aluminum, magnesium, their commercial alloys, and other metals of similarly hazardous characteristics

Group F - Atmospheres containing carbon black, coal, or coke dust

Group G - Atmospheres containing flour, starch, or grain dust

Class III - Fibers

Division 1 - Fibers handled, manufactured, or stored

Division 2 - Fibers handled or stored

(no groups)

Group Specifics

Group A - Atmospheres

acetylene

Group B - Atmospheres

acrolein (inhibited) (2)

arsine

butadiene (1)

ethylene oxide (2)

hydrogen

manufactured gases containing more than 30%

hydrogen (by volume)

propylene oxide (2)

propylnitrate

Group C - Atmospheres

acetaldehyde

allyl alcohol

n-butylaldehyde

carbon monoxide

crotonaldehyde

cyclopropane

diethyl ether

diethylamine

epichlorohydrin

ethylene

ethylenimine

ethyl mercaptan

ethyl sulfide

hydrogen cyanide

hydrogen sulfide

morpholine

2-nitropropane

tetrahydrofuran

unsymmetrical dimethyl hydrazine

(UDMH 1, 1-dimethyl hydrazine)

Group D - Atmospheres

acetic acid (glacial)

acetone

acrylonitrile

ammonia (3)

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

methyl isobutyl ketone

2-methyl-1 -propanol

(isobutyl alcohol)

Group D - Atmospheres (contin.)

2-methyl-2-propanol (tertiary butyl alcohol)

petroleum naphtha (4)

pyridine

octanes

pentanes

1-pentanol (amyl alcohol)

propane

1-propanol (propyl alcohol)

2-propanol (isopropyl alcohol)

propylene

styrene

toluene

vinyl acetate

vinyl chloride

xylenes

Group E - Atmospheres

containing metal dust, including aluminum, magnesium, and their commercial alloys, and other metals of similarly hazardous characteristics

Group F - Atmospheres

containing carbon black, coal or coke dust

Group G - Atmospheres

containing flour, starch or grain dust

(1) Group D equipment shall be permitted for this atmosphere if such equipment is isolated in accordance with Section 501-5(a) of National Electric Code by sealing all conduit 1/2 inch size or larger.

(2) Group C equipment shall be permitted for this atmosphere if such equipment is isolated in accordance with Section 501-5(a) of National Electric Code by sealing all conduit 1/2-inch size or larger.

For classification of areas involving ammonia atmosphere,

(3) See Safety Code for Mechanical Refrigeration (ANSI/ASHRAE 15-1978) and Safety Requirements for the Storage and Handling of Anhydrous Ammonia (ANSI/CGA G2.1-1972).

(4) A saturated hydrocarbon mixture boiling in the range 20-135°C (68-275°F). Also known by the synonyms benzine, ligroin, petroleum ether, or naphtha.