

■ Hazardous Locations Definitions

Hazardous areas are those in which a potential for explosion or fire exists, due to the presence of certain gases, liquid vapors, combustible dusts or fiber particles suspended in the air. The National Electrical Code®, NEMA, OSHA, UL, NFPA Life Safety Standards, as well as State and Local codes, prescribe the use of emergency lighting equipment. This equipment itself must not contribute to the ignition of flammable or explosive substances, present in the location. LightAlarms offers a complete line of emergency lighting equipment for use in hazardous locations.

▣ Hazardous Location Classifications

Class I (NEC-500-5)	Areas in which flammable gases or vapors may be present in sufficient quantities to be explosive or ignitable.
Class II (NEC-500-6)	Areas with risk of presence of combustible dust.
Class III (NEC-500-7)	Areas in which there are easily ignitable fibers or flyings present , due to the type of material being handled, stored or processed-but in which such fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.
Division 1 (NEC-500- 5,6 & 7)	Normal Situation: A hazard is present in the everyday normal production operation or during frequent repair and/or maintenance activity.
Division 2 (NEC-500- 5,6 & 7)	Abnormal Situation: Potentially hazardous material is expected to be safely confined within closed containers or closed systems, and will be present in the atmosphere only through accidental rupture, breakage, or abnormal operation.
Group A, B, C & D (NEC-500-3)	Gases and vapors in Class I locations are classified into four groups, by the code A, B, C, and D. These materials are grouped according to the ignition temperature of the substance, its explosion force and other flammability characteristics.
Groups E F & G (NEC-500-3)	Combustible dust in Class II locations are classified according to ignition temperature and the conductivity of the hazardous substance.

▣ Typical Class I Locations:

- Petroleum refineries, and gasoline storage and dispensing areas.
- Industrial firms that use flammable liquids in dip tanks for cleaning parts or other operations
- Petrochemical companies that manufacture chemicals from gas and oil.
- Dry cleaning plants where vapors from cleaning fluids can be present.
- Companies that have areas dedicated for spraying products with paint or plastics.
- Aircraft hangars and fuel servicing areas.
- Utility gas plants, and operations involving storage and handling of liquified petroleum gas or natural gas.

▣ Typical Class II Locations:

- Grain elevators, flour and feed mills.
- Plants that manufacture, use or store magnesium or aluminum powders.
- Plants that have chemical or metallurgical processes, producers of plastics, medicines, and fireworks etc.
- Producers of starch or candies.
- Spice grinding plants, sugar plants and cocoa plants.
- Coal preparation plants and other carbon handling or processing areas.

▣ Typical Class III Locations:

- Textile mills, cotton gins, cotton seed mills and flax processing plants.
- Clothing manufacturing plants
- Any plant that shapes pulverizes or cuts wood and creates saw dust or shavings.

FOR MORE INFORMATION CONSULT NEC CODE.