



Monthly Topic: Electrical Area Classification

- Electrical area classification is required by governmental bodies, such as OSHA and compliance is enforced.
- The National Electrical Code and NFPA 70 define area classification and installation principles.

- **Division and Zone Classification locations are defined as the following:**

- **Class I, Division 1** - An area where ignitable concentrations of flammable gases, vapors or liquids can exist all the time or some of the time under normal operating conditions. A Class I, Division I area encompasses the combination of Zone 0 and Zone 1 areas. Zone 0 is an area where ignitable concentrations of flammable gases, vapors or liquids are present continuously or for long periods of time under normal operating conditions (>10% of the time). Zone 1 is an area where ignitable concentrations of flammable gases, vapors or liquids are likely to exist under normal operating conditions (0.1-10% of the time).
- **Class I, Division 2** - An area where ignitable concentrations of flammable gases, vapors or liquids are NOT likely to exist under normal operating conditions. Zone 2 is an area where unwanted substances should only be present 0-0.1% of the time.
- **Class II, Division 1** - An area where ignitable concentrations of combustible dust can exist all the time or some of the time under normal operating conditions.
- **Class II, Division 2** - An area where ignitable concentrations of combustible dust are not likely to exist under normal operating conditions.
- **Class III, Division 2** - An area where easily ignitable fibers are stored or handled.
- **Class I, Division 1 & 2 Groups** - A-Acetylene, B-Hydrogen, C-Ethylene, D-Propane (representative).
- **Class II, Division 1 & 2 Groups** - E-Metal Dusts (Division 1 only), F-Carbonaceous Dusts (carbon) G-Non-conductive dusts such as flour, grain, wood and plastic.
- **Class III, Division 1 & 2** - Non-Ignitable fibers/flyings, such as cotton lint, flax and rayon.



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 Questions or Comments? Email info@aerionicsinc.com or Call 877-367-7891
 3601 N. St Paul Ave Sioux Falls, SD 57104