

WAC 296-155-456 Hazardous (classified) locations. (1) Scope.

This section sets forth requirements for electric equipment and wiring in locations which are classified depending on the properties of the flammable vapors, liquids or gases, or combustible dusts or fibers which may be present therein and the likelihood that a flammable or combustible concentration or quantity is present. Each room, section or area must be considered individually in determining its classification. These hazardous (classified) locations are assigned 6 designations as follows: Class I, Division 1; Class I, Division 2; Class II, Division 1; Class II, Division 2; Class III, Division 1; Class III, Division 2. For definitions of these locations see WAC 296-155-462. All applicable requirements in this part apply to all hazardous (classified) locations, unless modified by provisions of this section.

(a) You must choose all components and utilization equipment used in a hazardous location from among those listed by a nationally recognized testing laboratory, such as Underwriters' Laboratories, Inc., or Factory Mutual Engineering Corp., except custom-made components and utilization equipment.

(b) You must not install or intermix equipment approved for a specific hazardous location with equipment approved for another specific hazardous location.

(2) **Electrical installations.** Equipment, wiring methods, and installations of equipment in hazardous (classified) locations must be approved as intrinsically safe or approved for the hazardous (classified) location or safe for the hazardous (classified) location. Requirements for each of these options are as follows:

(a) **Intrinsically safe.** Equipment and associated wiring approved as intrinsically safe is permitted in any hazardous (classified) location included in its listing or labeling.

(b) **Approved for the hazardous (classified) location.**

(i) **General.** Equipment must be approved not only for the class of location but also for the ignitable or combustible properties of the specific gas, vapor, dust, or fiber that will be present.

Note: NFPA 70, the National Electrical Code, lists or defines hazardous gases, vapors, and dusts by "groups" characterized by their ignitable or combustible properties.

(ii) **Marking.** You must not use equipment unless it is marked to show the class, group, and operating temperature or temperature range, based on operation in a 40°C ambient, for which it is approved. The temperature marking must not exceed the ignition temperature of the specific gas, vapor, or dust to be encountered. However, the following provisions modify this marking requirement for specific equipment:

(A) Equipment of the nonheat-producing type (such as junction boxes, conduit, and fitting) and equipment of the heat-producing type having a maximum temperature of not more than 100°C (212°F) need not have a marked operating temperature or temperature range.

(B) Fixed lighting fixtures marked for use only in Class I, Division 2 locations need not be marked to indicate the group.

(C) Fixed general-purpose equipment in Class I locations, other than lighting fixtures, which is acceptable for use in Class I, Division 2 locations need not be marked with the class, group, division, or operating temperature.

(D) Fixed dust-tight equipment, other than lighting fixtures, which is acceptable for use in Class II, Division 2 and Class III locations need not be marked with the class, group, division, or operating temperature.

(c) **Safe for the hazardous (classified) location.** Equipment which is safe for the location must be of a type and design which you demon-

strate will provide protection from the hazards arising from the combustibility and flammability of vapors, liquids, gases, dusts, or fibers.

Note: The National Electrical Code, NFPA 70, contains guidelines for determining the type and design of equipment and installations which will meet this requirement. The guidelines of this document address electric wiring, equipment, and systems installed in hazardous (classified) locations and contain specific provisions for the following: Wiring methods, wiring connections, conductor insulation, flexible cords, sealing and drainage, transformers, capacitors, switches, circuit breakers, fuses, motor controllers, receptacles, attachment plugs, meters, relays, instruments, resistors, generators, motors, lighting fixtures, storage battery charging equipment, electric cranes, electric hoists and similar equipment, utilization equipment, signaling systems, alarm systems, remote control systems, local loud speaker and communication systems, ventilation piping, live parts, lightning surge protection, and grounding. Compliance with these guidelines will constitute one means, but not the only means, of compliance with this subsection.

(3) **Conduits.** All conduits must be threaded and must be made wrench-tight. Where it is impractical to make a threaded joint tight, you must utilize a bonding jumper.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-456, filed 4/19/16, effective 5/20/16; WSR 07-03-163, § 296-155-456, filed 1/24/07, effective 4/1/07. Statutory Authority: Chapter 49.17 RCW. WSR 88-11-021 (Order 88-04), § 296-155-456, filed 5/11/88.]