

**WAC 296-307-37206 What classifications apply to this section?**

These hazardous locations are classified as follows:

(1) "Class I locations" are those in which flammable gases or vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. They include the following:

(a) Class I, Division 1 locations are those where:

(i) Hazardous concentrations of flammable gases or vapors may exist under normal operating conditions; or

(ii) Hazardous concentrations of such gases or vapors may exist frequently because of repair or maintenance operations or because of leakage; or

(iii) Breakdown or faulty operation of equipment or processes might release hazardous concentrations of flammable gases or vapors, and might also cause simultaneous failure of electric equipment.

This classification usually includes locations where:

- Volatile flammable liquids or liquefied flammable gases are transferred from one container to another;

- Interiors of spray booths and areas in the vicinity of spraying and painting operations where volatile flammable solvents are used;

- Locations containing open tanks or vats of volatile flammable liquids;

- Drying rooms or compartments for the evaporation of flammable solvents;

- Locations containing fat and oil extraction equipment using volatile flammable solvents;

- Gas generator rooms and other portions of gas manufacturing plants where flammable gas may escape;

- Inadequately ventilated pump rooms for flammable gas or for volatile flammable liquids;

- The interiors of refrigerators and freezers in which volatile flammable materials are stored in open, lightly stoppered, or easily ruptured containers; and

- All other locations where ignitable concentrations of flammable vapors or gases are likely to occur in the course of normal operations.

(b) Class I, Division 2 locations are those where:

(i) Volatile flammable liquids or flammable gases are handled, processed, or used, but in which the hazardous liquids, vapors, or gases are normally confined within closed containers or systems from which they can escape only in an accidental rupture or breakdown of containers or systems, or in case of abnormal operation of equipment; or

(ii) Hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation, and which might become hazardous through failure or abnormal operation of the ventilating equipment; or

(iii) They are adjacent to a Class I, Division 1 location, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided.

This classification usually includes locations where:

- Volatile flammable liquids or flammable gases or vapors are used, but which would become hazardous only in case of an accident or unusual operating condition. The quantity of flammable material that

might escape in case of accident, the adequacy of ventilating equipment, the total area involved, and the record of the industry or business with respect to explosions or fires are all factors to consider in determining the classification.

- Piping without valves, checks, meters, and similar devices would not ordinarily introduce a hazardous condition even though used for flammable liquids or gases. Locations used for the storage of flammable liquids or a liquefied or compressed gases in sealed containers are not normally considered hazardous unless also subject to other hazardous conditions.

- Electrical conduits and their enclosures separated from process fluids by a single seal or barrier are Division 2 locations if the outside of the conduit and enclosures is a nonhazardous location.

(2) "Class II locations" are those that are hazardous because of the presence of combustible dust. They include the following:

(a) Class II, Division 1 locations are those where:

(i) Combustible dust is or may be suspended in the air under normal operating conditions, in quantities sufficient to produce explosives or ignitable mixtures; or

(ii) Mechanical failure or abnormal operation of machinery or equipment might produce explosive or ignitable, and might also provide a source of ignition through simultaneous failure of electric equipment, operation of protection devices, or from other causes; or

(iii) Combustible dusts of an electrically conductive nature may be present.

This classification may include areas of grain handling and processing plants, starch plants, sugar-pulverizing plants, malting plants, hay-grinding plants, coal pulverizing plants, areas where metal dusts and powders are produced or processed, and other similar locations that contain dust producing machinery and equipment (except where the equipment is dust-tight or vented to the outside). These areas would have combustible dust in the air, under normal operating conditions, in quantities sufficient to produce explosive or ignitable mixtures.

Combustible dusts that are electrically nonconductive include dusts produced in the handling and processing of grain and grain products, pulverized sugar and cocoa, dried egg and milk powders, pulverized spices, starch and pastes, potato and wood flour, oil meal from beans and seed, dried hay, and other organic materials that may produce combustible dusts when processed or handled. Dusts containing magnesium or aluminum are particularly hazardous and the use of extreme caution is necessary to avoid ignition and explosion.

(b) Class II, Division 2 location are those where:

(i) Combustible dust is not normally suspended in the air in quantities sufficient to produce explosive or ignitable mixtures; and dust accumulations are normally insufficient to interfere with the normal operation of electrical equipment or other apparatus; or

(ii) Dust may be in suspension in the air as a result of infrequent malfunctioning of handling or processing equipment, and resulting dust accumulations may be ignitable by abnormal operation or failure of electrical equipment or other apparatus.

This classification includes locations where dangerous concentrations of suspended dust would not be likely but where dust accumulations might form on or in the vicinity of electric equipment. These areas may contain equipment from which appreciable quantities of dust would escape under abnormal operating conditions or be adjacent to a

Class II Division 1 location into which an explosive or ignitable concentration of dust may be suspended under abnormal operating conditions.

(3) "Class III locations" are those that are hazardous because of the presence of easily ignitable fibers or flyings but in which such fibers or flyings are not likely to be suspended in the air in quantities sufficient to produce ignitable mixtures. They include the following:

(a) Class III, Division 1 locations are those where easily ignitable fibers or materials producing combustible flyings are handled, manufactured, or used.

Such locations usually include combustible fiber manufacturing and processing plants; cotton gins and cottonseed mills; flax-processing plants; and industries involving similar hazardous processes or conditions.

Easily ignitable fibers and flyings include rayon, cotton (including cotton linters and cotton waste), sisal or henequen, istle, jute, hemp, tow, cocoa fiber, oakum, baled waste kapok, Spanish moss, excelsior, and other materials of similar nature.

(b) Class III, Division 2 locations are those where easily ignitable fibers are stored or handled, except in process of manufacture.

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