



## Article 503

### Class III Hazardous (Classified) Locations

According to 500.5(D), a Class III location is an area where easily ignitable fibers or flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures, but may collect around heat-generating machinery or luminaires.

- A Class III, Division 1 location is an area where ignitable fibers or flyings are manufactured, handled or used. Such areas include textile mills, clothing manufacturing plants and facilities that create sawdust and flyings by pulverizing or cutting wood.
- A Class III, Division 2 location is a location where easily ignitable fibers are stored or handled other than in the manufacturing process.

#### 503.1 General

The general requirements contained in Chapters 1 through 4, as well as the requirements of Article 503, apply to the electric wiring and equipment in Hazardous Class III locations [500.1].

*Exception:* As modified by this article.

Equipment installed in Class III locations shall be able to function without developing surface temperatures high enough to cause spontaneous ignition.

#### 503.3 Wiring Methods

The wiring methods permitted in Class III locations include:

##### (A) Class III, Divisions 1 and 2 [503.3(B)]

Rigid metal conduit, steel intermediate metal conduit, rigid nonmetallic conduit, electrical metallic tubing, dusttight wireways, MI and MC cable with listed fittings.

- (1) **Boxes and Fittings.** Boxes and fittings that are dusttight (not dust-ignitionproof).
- (2) **Flexible Connections.** Liquidtight flexible conduit with listed fittings, liquidtight flexible nonmetallic conduit with listed fittings, or flexible cord, in accordance with 503.10.

#### 503.4 Switches, Circuit Breakers, Motor Controllers and Fuses

Enclosures for switches, circuit breakers, motor controllers and fuses, including pushbuttons, relays and similar devices intended to interrupt current during normal operation in Class III locations shall be dusttight. Figure 503-1

**AUTHOR'S COMMENT:** According to Article 100, dusttight means that it has been constructed so dust will not enter the enclosing case under specified test conditions.

#### 503.5 Control Transformers

Control transformers installed in Class III locations shall be installed within dusttight enclosures that comply with the temperature limitation in 503.1.

#### 503.6 Motors and Generators

Motors, generators and other rotating electrical equipment installed in Class III locations shall be totally enclosed nonventilated, pipe-ventilated, or fan-cooled.

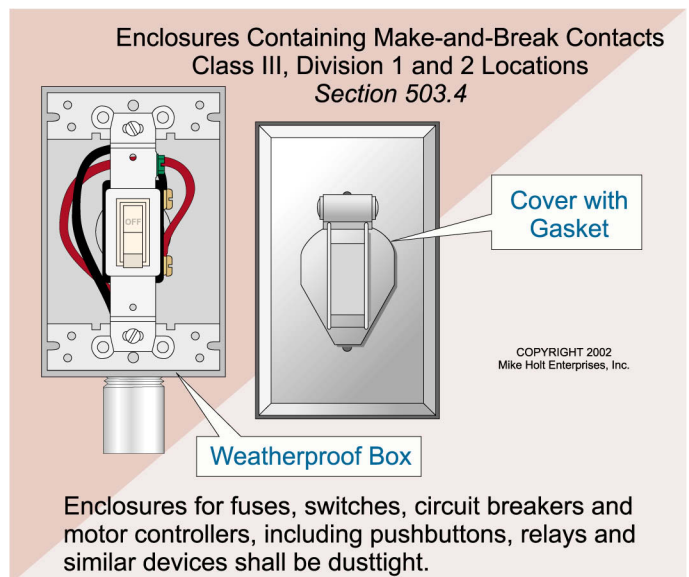


Figure 503-1