



Go directly to a UL Service:

Global Locations

Div. 2 HazLoc motor requirements updated

-Vol. 2, No. 1 1993, *The Code Authority*

NOTE: This information is from a printed newsletter dated 1993 and is presented here for archival purposes only. For current information, please see the main [Hazardous Locations](#) pages.

UL has updated the Outline of Investigation for Electric Motors for Use in Class I, Division 2 and Class II, Division 2 Hazardous (Classified) Locations, UL Subject 1836.

Traditionally, code authorities have not required that electric motors for use in Division 2 locations be Listed. However, Listed Division 2 motors are currently being specified by users, designers and manufacturers for a variety of applications. One of these is the growing use of electric motors with adjustable speed drives in Division 2 areas. In this case, the rotor can generate high operating temperatures due to excessive slip and harmonic heating.

UL has been Listing electric motors for use in Class I, Division 1 and Class II, Division 1 areas for many years, using the Standard for Electric Motors and Generators for Use in Hazardous (Classified) Locations, UL 674. Class I and Class II hazardous locations are each subdivided into Divisions 1 and 2, depending upon whether the hazardous conditions are to be expected under normal operating conditions (Division 1), or only in case of abnormal or unusual conditions, such as accidental rupture of CBO ES containers or failure of mechanical ventilation (Division 2).

Sections 501-8(b) of the NEC specifies the requirements for Class I, Division 2 electric motors. Arcing and sparking parts, such as winding thermostats, are required to comply with the applicable Class I, Division I requirements or be contained in hermetically sealed enclosures. Operating temperatures of space heaters are required to be marked on the nameplate. Also, the operating temperature of internal and external parts is to be considered and should not exceed the ignition temperature of the gas or vapor that may be present.

Section 502-8(b) of the NEC specifies the requirements for Class II, Division 2 electric motors. These motors are to be totally enclosed, with maximum external surface temperatures not exceeding the ignition temperature of the specific dust to be encountered. UL plans to propose the updated Outline as the first edition of Standard UL 1836 by year's end. Additional requirements applicable to this type of product, including those from the American National Standards Institute (ANSI) and the National Electrical Manufacturers Association (NEC), will be specified in the Standard. The requirements will specify that motors be marked to identify the intended Classes and Groups, the operating temperatures or codes, and the space heater surface temperatures.

For more information on electric motors for hazardous locations, contact [Russ Filip](#) at Northbrook, Ill., +1-847-272-8800, ext. 42841, or fax him at +1-847-272-9475.

[Back to hazardous locations articles](#)

