(a) Intrinsically safe apparatus having a control drawing requiring the installation of associated apparatus for a Division 1 installation shall be permitted to be installed in a Division 2 location if the same associated apparatus is used for the Division 2 installation.

(b) Equipment required to be explosionproof shall incorporate seals in accordance with 501.15(A) or (D) when the wiring methods of 501.10(B) are employed.

(3) General-Purpose Equipment. Where specifically permitted in Part III of Articles 501, 502, and 503, general-purpose equipment or equipment in general-purpose enclosures shall be permitted to be installed in Division 2 locations if the equipment does not constitute a source of ignition under normal operating conditions.

(4) Process Seals. Equipment that depends on a single compression seal, diaphragm, or tube to prevent flammable or combustible fluids from entering the equipment shall be identified for a Class I, Division 2 location even if installed in an unclassified location. Equipment installed in a Class I, Division 1 location shall be identified for the Class I, Division 1 location.

Informational Note: Equipment used for flow measurement is an example of equipment having a single compression seal, diaphragm, or tube.

(5) Motors. Unless otherwise specified, normal operating conditions for motors shall be assumed to be rated full-load steady conditions.

Locked-rotor or other abnormal motor conditions, such as single phasing, are not considered when evaluating motor-operating temperatures (internal and external) in Class I, Division 2 locations. However, such abnormal load conditions must be considered when the external temperatures of explosionproof motors for Class I, Division 1 locations and dust-ignitionproof motors for Class II, Division 1 locations are evaluated. Awareness of increased temperatures in motors controlled by variable-speed drives is important when they are operated at lower speeds and are dependent on the fan for cooling.

Δ **(6) Simultaneous Classifications.** Where flammable gases, flammable liquid–produced vapors, or combustible liquid–produced vapors and combustible dusts are or might be present at the same time, the simultaneous presence of the specific materials shall be considered when determining the safe operating temperature of the electrical equipment.

Examples of where flammable liquid and dust might be simultaneously present are at a coal-handling facility, where there is methane gas and coal dust, and in an automotive paint spray shop, where flammable paint and powdered metal flecks are sprayed. In the presence of such a combination of simultaneous hazards, less energy may be needed, and the accumulation of gas need not be in the flammable range for an ignition to occur.

(C) Marking. Equipment shall be marked to show the environment for which it has been evaluated. Unless otherwise specified or allowed in 500.8(C)(6), the marking shall include the information specified in 500.8(C)(1) through (C)(5).

(1) Class. The marking shall specify the class(es) for which the equipment is suitable.

Δ **(2) Division.** The marking shall specify the division if the equipment is suitable for Division 2 only. Equipment suitable for Division 1 shall be permitted to omit the division marking.

Informational Note: See 500.8(B)(2). Equipment not marked to indicate a division, or marked "Division 1" or "Div. 1," is suitable for both Division 1 and Division 2 locations. Equipment marked "Division 2" or "Div. 2" is suitable for Division 2 locations only.

(3) Material Classification Group. The marking shall specify the applicable material classification group(s) or specific gas, vapor, dust, or fiber/flying in accordance with 500.6.

Exception: Fixed luminaires marked for use only in Class I, Division 2 or Class II, Division 2 locations shall not be required to indicate the group.

Informational Note: A specific gas, vapor, dust, or fiber/flying is typically identified by the generic name, chemical formula, CAS number, or combination thereof.

(4) Equipment Temperature. The marking shall specify the temperature class or operating temperature at a 40°C ambient temperature, or at the higher ambient temperature if the equipment is rated and marked for an ambient temperature of greater than 40°C. For equipment installed in a Class II, Division 1 location, the temperature class or operating temperature shall be based on operation of the equipment when blanketed with the maximum amount of dust that can accumulate on the equipment. The temperature class, if provided, shall be indicated using the temperature class (T codes) shown in Table 500.8(C)(4). Equipment for Class I and Class II shall be marked with the maximum

TABLE 500.8(C)(4) *Classification of Maximum Surface Temperature*

Maximum Temperature		Temperature Class (T Code)
°C	°F	
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T4A
100	212	T5
85	185	T6