Guide to Hazardous Locations
Explosive Gas Atmospheres

**Ex Marking**

**US (NEC® 505) and CAN (CCEA Annex J18)**

- **Type of protection**
  - **U.S.**
  - **Canadian**
  - **International**

- **Div. 1**
  - **Zone 1**
  - **Zone 2**

- **Encapsulation**
  - **Restricted Breathing**
  - **Extended Breathing**

- **Intrinsic Safety**
  - **High**
  - **Medium**
  - **Low**

**FM Approvals is your global conformity assessment solution.**

**Protection Concepts**

- **General Requirements**
  - **US Class I, Division 1 & 2**
  - **US Class I, Division 2**
  - **Canadian Class I**
  - **European Class I**

- **North America**
  - **Zone 1**
  - **Zone 2**

- **Zone 1**
  - **Zone 2**

- **Objects greater than 1mm**
  - **IEC 60079-18**
  - **T1**
  - **Zone 1**
  - **Category 3G**
  - **Objects greater than 2.5mm**
  - **FM 3620 (NFPA 496)**
  - **EN 60079-11**
  - **Class I, Division 1**
  - **T2A**
  - **No protection**
  - **T3**

- **Europe**
  - **Zone 2**
  - **Class I, Division 1**
  - **T4**

- **Equipment Grouping**
  - **US (NEC® 505)**
  - **CAN (CCEA Annex J18)**
  - **CEC**
  - **ATEX**

- **Temperature Class**
  - **40°C**
  - **60°C**
  - **90°C**
  - **120°C**

- **Ingress Protection (IP) Codes**
  - **Note 1**: For associated intrinsically safe apparatus suitable for installation in a hazardous location, the symbols for the type of protection are optional.

**Acronyms**

- **ATEX**: ATEX is the EU Directive 94/9/EC on equipment intended for use in potentially explosive atmospheres.
- **FM**: FM Approvals is a division of FM Global, which provides global recognition and certification for equipment intended for use in potentially explosive atmospheres.
- **IEC**: The International Electrotechnical Commission is a worldwide organization for standardization in the electrotechnical, electronic, and related fields.
- **IP**: IP numbers are used to classify the degree of protection against ingress of solid objects and water.
- **NEC**: The National Electrical Code is a set of electrical engineering standards published by the National Fire Protection Association (NFPA).