COAST'S NEW SAFETY RATED LIGHTING:

HZ SERIES

Many professionals work in locations or conditions that are deemed to be a hazardous environment. Due to the nature of many of these environments, many of these locations require the use of portable lighting to get the job done. Despite the need for illumination, the primary safety concern tends to be an accidental fire or explosion.

The source of energy that powers portable lighting products and power source will vary depending on the model. Batteries power Coast's lighting products. Batteries are capable of producing heat and steps have to be taken to contain it. Heat exposure in specific hazardous environments can create many potential dangers.

Keeping in stride with Coast's mission to make the user's job safer, easier, and more enjoyable, we have developed a new category of products that will all achieve varying levels of standardized safety ratings. The HZ series lights will serve this segment of workers, who are required to adhere to the most stringent safety regulations and policies, to be able to complete the job with better ease and without worry of exposure to risk.

COAST®

LIGHTS • KNIVES • MULTI-TOOLS

SAFETY RATINGS 101:

Across the globe, some agencies create and monitor a series of safety regulations that are designed to protect any professional that works in hazardous locations with electronic devices. The ATEX directive is the regulations for the European Union. It consists of two EU directives that describe what equipment and workspace are allowed in an environment with an explosive atmosphere. The ATEX directive covers explosions from gases and solid dust, both of which can lead to hazardous risks. In the United States, these regulations are outlined and defined by the National Electric Code (NEC), which is a publication from the National Fire Protection Association (NFPA). The specific article NEC 500 classifies hazardous environments based on the types and likely concentrations of hazardous materials present in that area. NEC 500 provides a classification protocol for hazardous locations based on the following four categories: Class, Division, Group, and Temperature Class.

ZONE

While the Groups define the materials that make an area hazardous, the Zone defines how flammable an area is. It also includes what type of materials make an area flammable.

- Zone 0 (Gas) / Zone 20 (Dust):

A place in which an explosive atmosphere is continually present.

- Zone 1 (Gas) / Zone 21 (Dust):

A place in which an explosive atmosphere is likely to occur in normal operation occasionally.

- Zone 2 (Gas) / Zone 22 (Dust):

A place in which an explosive atmosphere is not likely to occur in normal operation, but if it does only occurs for short periods.

EQUIPMENT GROUP AND CATEGORY

The equipment group of a product defines where it can be used safely. At a higher level, products are broken down into three major categories - electrical equipment for gases, vapors, and mists (G), electrical equipment for combustible dust (D), and non-electrical equipment.

Equipment Groups:

- Group I- Mines with firedamp
- Group II- All other areas

Equipment Category (Gas):

- Category 1 G- Suitable for Zones 0,1,2
- Category 2 G- Suitable for Zones 1,2
- Category 3 G- Suitable for Zone 2

Equipment Category (Dust):

- Category 1 D- Suitable for Zones 20,21,22
- Category 2 D- Suitable for Zones 21,22
- Category 3 D- Suitable for Zone 22

GROUPS

To further distinguish the hazardous materials in the class section, the NEC 500 standard separates these specified (but not limited to) materials into Groups as follows:

- Group I- Methane (Firedamp)
- Group IIA- Methane, Propane etc.
- Group IIB- Ethylene
- Group IIC- Hydrogen, Acetylene etc.
- Group IIIA- Combustible flyings
- Group IIIB- Non-Conductive
- Group IIIC- Conductive

TEMPERATURE

The temperature rating is the maximum surface temperature of any device used in a hazardous location. In order to take a device into an environment where known hazardous materials are present, the device must not have a maximum surface temperature greater than the ignition temperature of those hazardous materials. The rating breakdown on maximum surface temperature is as follows:

- T1: 450° C
- T2: 300° C
- T3: 200° C
- T4: 135° C
- T5: 100° C
- T6: 85° C

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HZ SERIES

II 1G Ex ia Op is IIC T3/T4 Ga

Equipment Group II

Equipment Category 1G and Intrinsically Safe (ai)

Suitable for Zones 0,1, and 2

ia Intrinsic Safety

Focused optic tested for safety (Op is)

- Gas Group IIC- Hydrogen, Acetylene
- Gas Group IIB- Ethylene
- Gas Group IIA- Methane, Propane

T3/T4:

- T3: 200° C Maximum Surface Temperature using Duracell MN1500 Batteries
- T4: 135° C Maximum Surface Temperature using L91 Lithium Energizer

I M1 Ex ia I Ma

Equipment Group I

Equipment Category M1and Intrinsically Safe (ia)

Suitable for mining locations with firedamp

- Gas Group I (Firedamp)

*Classifications are not final and changes are possible until certification is complete.