Hazardous Location Lighting Basics

The way that we talk about hazloc lights can be confusing for someone to understand who has no idea what we are talking about.

That's okay though, I am here to break it down.

Let's start with what is a hazloc light?

Hazloc stands for hazardous location and hazloc lights are lights that are designed to be used in areas with possible fire or explosion risks due to explosive atmospheres and/or mixtures. An explosive atmosphere may be present in extreme heat, dusty or powder filled work areas, salt water/corrosive atmospheres, underground mining tunnels where humidity and pressure is great and within power producing plants with ignitable fuels.

Why would I need a hazloc light? A hazloc light is important because it is designed, tested and certified to work in the appropriate explosive environment. Many facilities with potential for hazards now require UL rated products in order to be certified operational.

How do I know the difference between hazloc lights?

That is where it can get more confusing. In the USA, we use a process of classes and divisions to classify our hazloc fixtures.

The classes signify which type of potentially explosive elements are in the air.

Class I is gasses

Class II is dust and powders

Class III is fibers.

All three of these have a high chance of being explosive or harmful to the product if there is too much of it within the atmosphere.

Divisions determine whether or not the gasses, dusts and powders, or fibers are in the air ALL of the time or NOT NORMALLY present.

Division 1 is when the potentially harmful substance determined by the class, is in the air ALL of the time.

Division 2 is when the substance is NOT NORMALLY present in the atmosphere.

For example, the Linear Tuff Series is Class I Division 1, so it is guaranteed explosion

proof for gasses, dust and fibers that are in the work atmosphere ALL the time. While the Round Series is guaranteed for gasses when they are NOT NORMALLY in the atmosphere, but when dust and fibers are in the air ALL the time.

How do I know how durable my hazloc light is?

The IP codes on hazloc lights are what determines how protective their outer shell is against water and dust.

The first number in an IP code is the protection from solid objects accessing the LED. Starting at 0 for large objects and ending at 6 for being completely dust proof.
The second number in the IP code represents how waterproof the shell is. Starting from 0 providing no protection from water and 9 meaning it can take the force of steam jet cleaning.
As an example, our high bay hot series has an IP67, meaning it is completely dustproof and can be immersed underwater for a short period of time.
That is the basis for the classification of hazloc light fixtures.

If you would like to learn more we have a pdf on our website that goes more in-depth on hazloc light classifications.