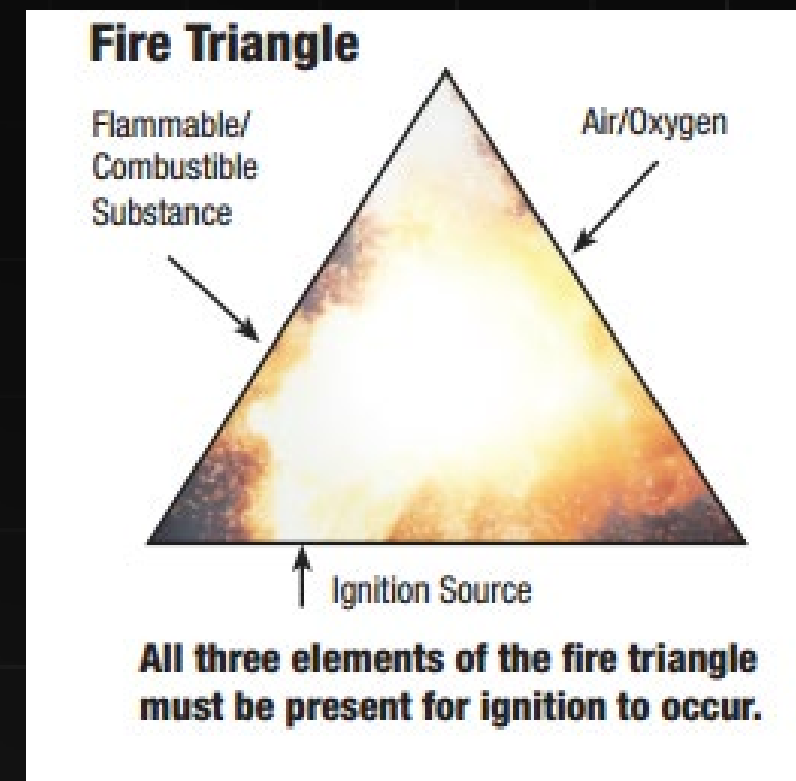


NITECORE EF1 SAFETY RATING EXPLANATION

Illustrated in the diagram below:

Factors necessary to constitute an explosion:

1. Oxygen
2. Flammable substance
3. Ignition source



Eliminating any one of the 3 factors will prevent an explosion from occurring, making an equipment safe to use in an specific environment.

DESIGN AND PURPOSE OF THE NITECORE EF1


The EF1 employs the flameproof enclosure method from the explosion proof family. It is designed to contain an explosion inside its confined area where neither the explosion nor any spark it generates will propagate to the outside atmosphere. The basic concept is that, while an internal explosion is possible, its spark and high temperature gas within the enclosure will be totally prevented from engaging in any contact with the outside atmosphere, combustible or not.

SAFETY MARKING/RATING ON EF1

According to European directive ATEX(EN60079-0:2012, EN60079-1:2012), the Nitecore EF1 has its safety rating marked at

"  II 2G EEx d IIC T6 Gb",

this can be perceived accordingly by dividing its rating into individual sub-groups, as described in the explanations below:

 II: Ex denotes the product is classed as explosion proof, whilst the "II" defines it as a product safe to use with high level of safety in gas/mist/vapor/dust environment above ground.

2G: This mark denotes the category of EF1. A category 2G product is applicable in Zone 1 and Zone 2 hazard area, which means that it can be used in atmosphere where gas, vapor and mist can form under normal conditions.

 II **2G** EEx d IIC T6 Gb

EEx d: EEx identifies that the described product is an electric appliance. The letter behind indicates its protection method. In EF1's case, "d" indicates flameproof enclosure.



II 2G **EEx d** IIC T6 Gb

IIC: This is the gas group for which the product is intended for. Some of the iconic gases included in this group are hydrogen, ethylene and propane, and this rating allows the product to be used in environments containing these gases.

 II 2G EEx d **IIC** T6 Gb

T6: This is the temperature class, which defines the maximum permissible surface temperature of the equipment. In all circumstances, it must be ensured that the ignition temperature of an inflammable material is not reached during operation, hence the maximum surface temperature of the device must be lower than the minimum ignition temperature for any particular inflammable material. The T6 rating gives the EF1 a maximum permissible surface temperature of 85 degree Celsius.

 II 2G EEx d IIC **T6** Gb

Gb: This is the equipment protection level. A product with Gb rating provides high level of protection, which prevents it from being the ignition source in any operation abnormality.

Ex II 2G EEx d IIC T6 **Gb**