

DEFINITIONS

Explosives safety is the systems, controls and processes used to prevent premature, unintentional, or unauthorised initiation of explosives and devices containing explosives; and associated with minimising the effects of explosions, combustion, toxicity, and any other deleterious effects.

Explosives safety includes:

All mechanical, chemical, biological, electrical and environmental hazards associated with explosives; hazards of electromagnetic radiation to ordnance; and combinations of these hazards.

Equipment, systems, or procedures and processes whose failure would hazard the safe manufacturing, handling, maintenance, storage, transfer, release, testing, delivery, firing or disposal of explosives.

Explosives safety hazards can be classified into the following four groups:

Intrinsic hazards. Those hazards presented by explosive material in its quiescent state, such as toxicity, composition breakdown, gas / heat generation, material incompatibility etc.

External and internal hazards. Which could initiate an explosive component or have an adverse effect on the firing chain, such as spurious fire commands, Electro Magnetic Compatibility / Environmental Electromagnetic Effects (EMC / E³) emissions, temperature/drop/shock/vibration, firing chain failure, aerodynamic heating, fragment and bullet attack etc.

Hazardous consequences of initiation. Including partial initiation (whether intentional or unintentional) of the explosive component, such as blast, fragment, noise, toxic efflux, heat etc.

Post launch and dynamic safety hazards. Such as loss of guidance control, unintended launch, ricochet, early burst, etc.

Explosives event is the premature, unintentional, or unauthorised initiation of explosives and devices containing explosives. The result of such events typically give rise to hazardous consequences such as blast, fragmentation and heat. Explosives events are a subset of EO incidents defined in eDEOP 101.