



**CREATIVE SAFETY SDN BHD. FIRE EXTINGUISHING ROUND
BLUEPRINT**

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1.0 EXECUTIVE SUMMARY

Fire hazard had caused a lot of damage in the past, and due to the unpredictable nature of fire accidents, it would likely still cause damages in the future. The conventional fire extinguisher had been around for many years and is a great tool to help deal with starting fires and small fires to prevent it from growing larger. However, the design of a conventional fire extinguisher is not ergonomic, removing ease of control of the device. It is also heavy which might make some users struggle to use it. The large quantity of powder in the device also leads to a higher amount of waste as a fire is unlikely to occur a lot during the lifespan of the fire extinguishing powder. To overcome the problems mentioned, a new product called the Fire Extinguishing Rounds for a flare gun is introduced. The product is lightweight, portable, ergonomic, and easy to use. The product may be kept anywhere to give a better accessibility to the device whenever needed.

The product uses the mechanics of a flare gun and its round to launch a projectile that would disperse fire extinguishing powder onto an area. The simple mechanics of a flare gun would ensure the product's reliability upon usage, as it does not get jammed upon firing, which proves to be vital in a firefighting situation. The fire extinguishing rounds shares similar mechanics to a regular flare rounds, but the projectile is design to put out flames instead of igniting it.

2.0 PRODUCT DESCRIPTION

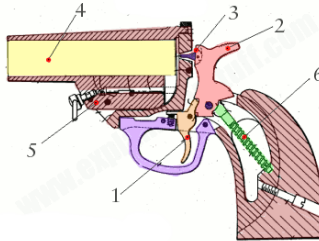


Figure 2.1: Flare Gun

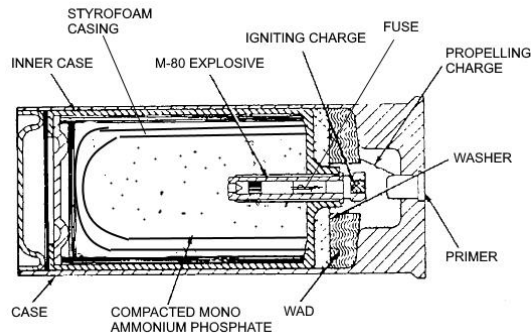


Figure 2.2: Fire Extinguishing Rounds

Figure 2.1 and 2.2 shows the schematics of the new product. The product would consist of a high-quality, durable, and lightweight launching device that is commonly known as flare gun, and a fire extinguishing round. The fire extinguishing rounds would then be loaded into the gun and fired onto the enflamed area. The round would then burst and spread fire extinguishing powders onto the enflamed area, killing the fires.

Launching Device

The gun used is made from high quality, durable, lightweight material to ensure full safety upon usage of the fire extinguishing rounds. A safety feature that can be implemented is to replace the hammer mechanism of the gun to prevent it from firing live rounds. One suggested mechanism is to use a spark plug instead of a hammer, which would ignite a primer to engage the propelling charge into launching the projectile.

Fire Extinguishing Rounds

The fire extinguishing rounds is basically a 12-gauge flare ammunition, that is tweaked to minimize any possible damage and ensure safety of the user and anyone that is close to the rounds upon impact. The illuminating compound of a flare in its compartment is replaced with compacted Mono Ammonium Phosphate, encased inside a polystyrene shell. The M-60 explosive is used because it is strong enough to burst through the polystyrene case, but not powerful enough to harm anyone near its explosion. This would help disperse the compound onto the flames to extinguish them.