

Safe handling of explosives research paper example

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Introduction

Explosives are generally regarded as dangerous because of their capability to release tremendous amount of energy. Depending on the purpose and type of the explosive, it may inflict enormous damage to lives and properties. For the same reason, it is necessary that a general knowledge on how to safely handle explosives should be discussed. Explosives have been used extensively in military and industrial purposes. But even in its legitimate uses, explosives are handled with extreme precaution.

Unfortunately, due to the rise of terrorism, explosives under legitimate possession could go into the hands of terror groups, which can be used for inflicting damage and terror. For the same reason, it is important to know how explosives and potentially explosive chemicals should be handled and stored.

What are Explosives?

Explosives are defined as any material, which can be “ either a pure single substance or a mixture of substances, which is capable of producing an explosion by its own energy”. By definition, any chemical element or compound that has the potential to explode can be considered as explosive. Explosives can be classified as either as manufactured explosives or potentially explosive chemicals also known as PEC's. Manufactured explosives are those that are made primarily for explosion purposes, which

are designed for military and industrial use. Examples of such are “ TNT, explosive bolts, bullets, blasting caps, and fireworks”. On the other hand, PEC’s are quite hard to fully identify. Some PEC’s have already been identified and regulated under several legislations such as the Federal Hazardous Substances Act (FHSA), the Federal Explosives Law and Regulations and the Organized Crime Control Act of 1970 together with many other laws and regulations that govern the transportation, storage and use of explosives. Military and industrial explosives such as the C4 and the dynamite releases enormous power when detonated. For the same reason, these explosives are sought out by terror groups. However, if handled properly, manufactured explosives are stable under normal circumstances. On the other hand, potentially explosive chemicals (PEC’s) are particularly dangerous because of their unstable properties with high risk of exploding when exposed to slight changes in its environment.

How to Safely Handle Explosives

Primarily, explosives should be handled by professionals; persons and institutions that are licensed to handle explosives within or outside the state. As provisioned in the Organized Crime Control Act of 1970, it states that engaging in the business of importing, manufacturing, or dealing of explosive materials is unlawful without proper license. In other words, in order to handle explosives, one has to have the proper training, expertise and license issued by the government. The license requirement applies to manufacturing, selling and storing of explosives. Apparently, the act aims to regulate and track the manufacturing and selling of explosives to make sure that it is being used in legitimate purposes. Assuming that a license has

been obtained, one has to follow a set of guidelines stipulated under the Organized Crime Control Act of 1970. There are two basic activities in handling of explosives; the transportation and the storage. In transporting explosives, it is necessary that they should be handled with extreme care. As much as possible, explosives should avoid rough contact with its surroundings as it could create friction and may cause unexpected explosion. For the same reason, explosives should be placed in stable and strong containers while being transported to avoid breakage or impact while in transit. Most explosive compounds do not detonate by themselves. They need a primer or a stimulus in order to explode. In most designs of manufactured explosives, a detonator is used to shock the main explosive substance. Mostly, these detonators are located on the tip or the rear of the explosive device. And so, identification of these critical points is needed in handling explosive devices. Storing explosive devices is also a challenging task. When being stored, explosives should be properly labeled, most especially potential explosive chemicals or PEC's. Aside from labeling, it is also important the explosives should be stored in facilities that are substantially away from dwelling and critical infrastructures. It is also important to secure the storage facilities by hiring security personnel if necessary. An official handler should supervise the storage of explosives. In accordance with the law, the handler should have the proper credentials as well as the government license to handle explosives.

Conclusion

Explosives and potentially explosive chemicals are extremely dangerous and should be handled with extreme caution. Apparently, the law stipulates that only an authorized handler should supervise the transport and storage of explosives in order to make sure that no untoward incident due to negligence and incompetence happens. However, it is also interesting to know how explosives are being handled in general as an information campaign to let ordinary people know what measures are used to transport and store explosives. This information also serves as a precautionary measure for people to, as much as possible, avoid circumstances that would cause explosives to become unstable and explode unintentionally.

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