

Public Safety

The Episafe Protective Explosion Container



Protective Explosion Container has been proven to contain the combined blast and fragment effects of pipe bombs, hand grenades and other UXOs (Unexploded Ordnance)

TNO offers a vast range of services and products for public safety. TNO and Futura Composites B.V. developed an Protective Explosion Container, the Episafe. This Episafe has been proven to contain the combined load of blast and fragment effects of pipe bombs, hand grenades and other UXOs (Unexploded Ordnance). The Episafe redirects the blast upwards and captures the lethal fragments.

Background

TNO and Futura Composites B.V. developed the Episafe Protective Explosion Container. The Episafe protects personnel and vulnerable objects and infrastructure in case of threats due to terrorism and criminal attacks with pipe bombs, hand grenades and other UXOs. The Episafe is quickly placed over the unexploded item to prevent injury to people and severe damage to buildings and other objects in case of an explosion. A controlled in-situ

demolition of pipe bombs, hand grenades and UXOs can be performed without damaging the nearby vulnerable objects and infrastructure.

Product information

The Episafe consists of a hard inner cylinder with good ballistic properties and an energy-absorbing outer cylinder made of high performance plastic fiber. The Episafe captures most of the metal fragments and redirects the blast wave upwards, away from people and vulnerable objects.

The characteristics of the current two Episafe Protective Explosion Containers are:

- cylindrical shaped, inside diameter 39 or 49 cm;
- height 30 or 40 cm;
- weight 15 or 20 kg, can be placed by a single person;
- non ferrous/magnetic material.

The Episafe Protective Explosion Containers can be custom made to any specifications required (diameter, height and weight can be varied).

Performance

The Episafe can withstand the combined blast and fragment loading of cased explosive charges of up to 470 grams explosives (hand grenades and pipe bombs) and bare explosive charges up to 1 kilogram. Operational tests by the EOD of the Royal Netherlands Airforce in Kosovo showed that the Episafe performed well against controlled in-situ demolition of numerous UXOs.

TNO Defence, Security and Safety

'TNO Defence, Security and Safety' is the title under which TNO operates as a strategic partner for the Dutch Ministry of Defence and makes innovative contributions to enhancing the security of the Netherlands both at home and abroad. We also use our accumulated knowledge for foreign governments and for defence-related industries.

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