

INSENSITIVE MUNITIONS PACKAGING AND NON-PROPAGATING PALLETS.

Client:

Explosives and pyrotechnics manufacturer.

Basic Requirement:

- Many munitions manufacturers need to improve health and safety aspects of their production process that will include limiting propagation of munitions and components during production. Reducing sensitivity of munitions and their components both during and following assembly assists with transportation limitations and general factory safety.
- Bespoke transit containers and factory partitioning to reduce the effects of an accidental detonation within a factory.
- Reduction in component and munitions separation distances helping to utilise more factory space for production.
- Blast absorbing materials that can be moulded to suit a variety of shapes, sizes and apertures.
- The design must be proven in explosive trials.

Method:

- A detailed specification was established with the client, to ensure that all of the required bespoke features were considered in the design.
- Concept designs were created and presented to the client for discussion.
- Development of first stage prototypes that would be used in explosive trials.
- Trials protocols were constructed and agreed with the client. These included propagation detonations, and extensive use of data capture equipment to gain pressure readings and high speed imagery.
- Results and development considerations were obtained from the trials which lead to modifications of the design. The modifications were quickly implemented into the revised design and a second batch of prototypes were constructed for further explosive trials.
- The final design was put into production. The flexibility of the design allows for alteration to the internals to cater for various quantities and sizes of explosive containers. This makes this product ideal for a wide variety of explosive transit conditions that can be tailored to suit the client's needs.