## **Technical Data Sheet**

# Value beyond blasting

## EXEL Handi Trunkline Delav (HTD) Unit

### Description

Exel HTD Detonators are shock tube based detonators designed to control the millisecond delay sequence from hole to hole, across the surface of a blast. The special design of HTD detonators allows up to six outgoing shock tubes to be initiated and provides security of tube retention.



Exel HTD detonators consist of a length of Exel shock tube and a low strength delay detonator. The free end of the tubing is closed with a waterproof seal. The delay detonator is fully enclosed in a unique colour coded handiblock.

The J-Hook connector provides a rapid and secure means of attaching the signal tube to detonating cord. The j-hook is also colour coded and has a detonator delay time printed on it.

### Safety

Exel HTD detonators provide a high level of safety against initiation by static electricity, stray electrical currents and radio frequency transmission.

The full enclosure of the delay detonator by the handiblock guards against accidental initiation. However it contains explosive components. Care should be taken not to cause initiation by intense impact, friction or heat.

The detonator is a factory assembled in the handiblock and no attempt should be made to disassemble it.

### Application

Exel HTD detonators function as a surface relay system, which enables an unlimited number of blastholes to be fired in sequence. This permits large well-controlled blasts to be fired, producing better results more efficiently.

Exel HTD detonators are commonly used in conjunction with a delay detonator in every blasthole. The normal practice is for all in-hole detonators to have the same delay period and, as a result, the surface detonators control the firing sequence. Exel HTD detonators are produced with arrange of delay times to match to the needs of mines, quarries and construction projects.

#### **Technical Properties**

| Shock Tube               | Exel            |
|--------------------------|-----------------|
| Outer Diameter           | 3 mm            |
| Nominal Tensile Strength | 17 kgf          |
| Standard delays          | 17,25,42, 65 ms |

### **Recommendation for use**

Exel HTD detonators can initiate up to six 3-mm shock tubes in both the directions.

## NOTE: The HTD detonators are not suitable for the initiation of detonating cord.

Shock tubes are attached to Exel HTD detonator with the handiblock. Clip each shock tube into the handiblock, keeping the handiblock and tube at right angles. Ensure that the tubes are firmly hooked in place. The handiblock should be slid down the tubes to ensure crossovers have not formed. The handiblock does not require burying, as the detonator is a low shrapnel design.

Care should be taken to avoid damage to shock tube and detonators. Exel HTD can be reliably initiated by 8 strength electric detonators or detonating cords having PETN core charge above 5.0 g/m.

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### Packaging

Exel HTD units are packed into sealed barrier bags inside cardboard cases. All the detonators within a case have the same length and delay. No of units in a case varies according to the length of tube in the following manner.

| Length of Tube | No of Unit/Case |
|----------------|-----------------|
| 3 - 6 m        | 100             |
| 8m, 10 m       | 80              |
| 12 m ,14 m     | 60              |

### Storage and handling

Exel HTD detonators should be stored in a cool dry detonator magazine licensed for Detonator products. Stacks of cases should not be more than 2 m high.

Exel HTD detonators should be used within 12 months of manufacturing date. Delay detonators deteriorate with age, and should be used in order of manufacturing date (oldest first). Batches of detonators more than 4 years old should not be used.

## Trademarks

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