

# Exel™ Connectadet™ Detonators



## Description

*Exel™ Connectadet™* Detonators are signal tube based detonators designed to control the millisecond delay sequence from hole to hole, across the surface of a blast. The special design of *Connectadet™* Detonators allows up to six outgoing signal tubes to be initiated and provides security of tube retention. *Exel™ Connectadet™* Detonators consist of a length of *Exel™* signal 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 connector block. Delays from 9 ms to 100 ms incorporate colour coded *Exel™* tube, which matches the colour of the connector block.

The *Figure 80 (F80)* winding format is used for tube lengths in the 9 to 18 m range. This provides tangle free, easy to deploy leads. A plastic J-hook connector provides a rapid and secure method of attaching the signal tube to detonating cord. To simplify identification of the detonator delay time, the J-hook connector is also colour coded and has the detonator delay time printed on it.

## Safety

*Exel™ Connectadet™* Detonators provide a high level of safety against initiation by static electricity, stray electrical currents and radio frequency transmissions. The connector block fully encloses the delay detonator and guards against accidental initiation. However, the *Exel™ Connectadet™* Detonator contains sensitive explosive components. Care should be taken to avoid accidental initiation by intense

impact, friction or heat. *Exel™ Connectadet™* detonators may be used in temperatures up to 70°C. The detonator is factory assembled into the connector block and no attempt should be made to disassemble it. *Exel™ Connectadet™* Detonators are supplied in Class 1.1B packaging and have UN Number 0360.

## Application

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

## Technical Properties

Signal Tube	<i>Exel™</i>
Outer diameter	3mm
Nominal tensile strength	45kgf
Lengths	3.6, 4.9, 6.1, 9, 12, 15, 18

## Available Delay Range

Delay (ms)	Block Colour	Tube Colour
9	Green	Green
17	Yellow	Yellow
25	Red	Red
42	White	White
65	Blue	Blue
100	Orange	Orange
125	Cream	Yellow
150	Mustard	Yellow
175	Lime Green	Yellow
200	Light Green	Yellow

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## Recommendations For Use

*Exel™ Connectadet™* Detonators will initiate up to six 3 mm diameter signal tubes in both directions. **NOTE:** *Connectadet™ Detonators are NOT suitable for the initiation of detonating cord.*

Signal tubes are attached to *Exel™ Connectadet™* Detonators with the connector block. Clip each signal tube, singly into the connector block, keeping the connector and tube at right angles. Ensure that the tubes are firmly 'hooked' in place and that no signal tubes cross over or lie within 200 mm of the connector block. The signal tubes should be firmly grasped and the block should be slid down the tubes to ensure cross overs have not formed.

This is referred to, as the "clip and slide" technique. The connector does not require burying, as the detonator is a low shrapnel design. Care should be taken to avoid damage to signal tube and detonators. *Exel™ Connectadet™* detonators can be reliably initiated by *Exel™* Trunkline Delays (TLDs), *Exel™* Lead-In-Lines, #8 Strength Electric Detonators or detonating cords having PETN core charge 3.6 to 5.0 g/m.

## Packaging

*Exel™ Connectadet™* Detonators are packed into sealed "barrier bags" inside cardboard cases. All detonators within a case have the same lead length and delay. The case dimensions are 0.60 x 0.32 x 0.22 m. For short lead lengths, 3.6 to 6.1 m, the tubing is simply coiled. For long lead lengths, 9 to 18 m, the tubing is wound in the Figure 80 configuration.

Lead Length (m)	Units per Case	Nominal Gross Weight (kg)	
3.6	180	10	Coiled
4.9	160	11	
6.1	140	10	
9	70	8	F80
12	50	7	
15	50	7	
18	40	7	

## Storage And Handling

*Exel™ Connectadet™* Detonators should be stored in a cool, dry detonator magazine licensed for Class 1.1B explosives. Stacks of cases should be no more than 2 metres high. *Exel™ Connectadet™* Detonators should be used within 12 months of opening the sealed "barrier bag". 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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