Technical Data Sheet

Exel™ Lead in Line

The Power of Partnership

Description

Exel™ Lead in Line is a reel-off signal tube system for initiation of blasts. *Exel™ Lead in Line* consists of a long length of *Exel™* signal tube plus clear splices. The *Exel™* signal tube is high strength, high abrasion resistant tubing which transmits the initiation signal. Used to extend the length of non-electric assemblies, *Exel™ Lead-in Line* allows non-electric blast initiation from a safe location. It can be used at surface or underground mines, at quarries or at construction projects.

Key Benefits

- Reduce electrical hazards at blast initiation time
- Reduce blasting noise
- Provide positive blast initiation control
- Highly visible
- Easy to handle and deploy - don't tangle

Technical Properties

Signal tube	Pink or light-green - *Exel*™
Outer diameter (mm)	3.0 ±0.1
Nominal tensile strength	300 N at +20 ℃
Length on Spool (m)	750 or 1500
Splicing sleeve (mm) **- Outer Diameter** **- Inner Diameter**	 6.0 2.8

Handling and Initiation

Avoid damage to the shock tube. Never pull so hard as to stretch or break shock tubing. A premature initiation may result.

Exel™ Lead-in Line is designed to be spliced into non-electric assemblies:

- *Exel™ Lead in Line* should not be used in extremely wet conditions where the maintenance of dry splices cannot be guaranteed.
- *Exel™* shock tube should always be cut with a sharp, single bladed cutter or knife.
- Cuts should be made clean and at right angles taking care not to crush or collapse the cut ends.
- Always make cuts and splices under clean, dry conditions and always cap open tube ends to limit the exposure to moisture. Any freshly exposed open tube ends which are not to be capped should be immediately inserted into a splice or starter. The ingress of moisture or dirt may cause firing failure.
- Push the spliced ends firmly into the splicing sleeve so they butt together in the centre
- Lay out the *Exel™ Lead in Line* tube from the initiation point to a safe blast firing point. Do not place any spliced joins under tension during deployment. A simple overhand knot (see figure1) is recommended to keep tension off the splice. Additionally, wrap the signal tube several times around a rock or stake to anchor it whilst deploying. Appropriate special precautions must be taken under wet conditions as *Exel™ Lead in Line* spliced joints cannot be guaranteed as waterproof even when taped.

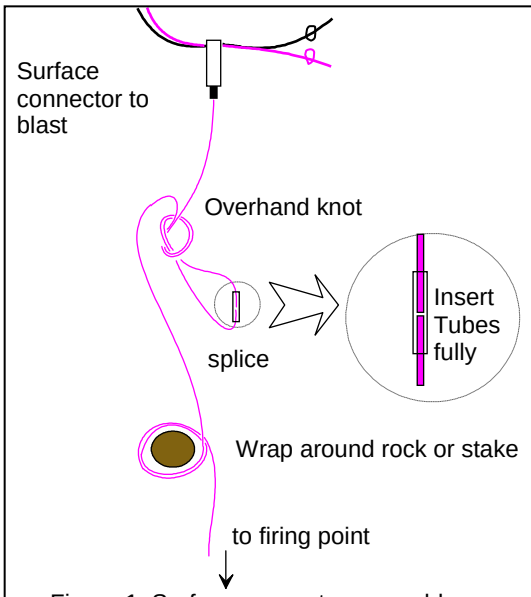

Figure 1: Surface connector assembly

Exel™

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- At the safe blast firing point, cut the *Exel™ Lead in Line* from the reel and connect to initiating device.

Exel™ Lead-in Line can be reliably initiated with:
- A non-electric starter device *Exel™ Start DS2* or *Exel™ Start HN1*
- A non-electric detonator assembly or plain detonator
- An electric detonator assembly
- An electronic detonator
- Remote starting of *Exel™ Lead in Line* is possible by using an Orica Remote Blasting System for initiation

Packaging

Exel™ Lead in Line is supplied on spools which hold 750 m or 1500 m of tubing. A standard cardboard outer case contains 2 of these spools and a short piece of clear plastic tube for splicing.
Total external dimension is 220 x 240 x 375 mm and the weight is 2.75 kg gross.

Product Classification

Authorised Name: *Exel™ Lead in Line*
EC Type Certificate: ENB/D/009/11

Exel™ Lead in Line as produced, packaged and shipped from manufacturer, is not classified as dangerous goods and may thus be transported as general cargo.

Storage and Disposal

Exel™ Lead in Line should be stored in a dry, well-ventilated magazine with the ends of the tube specially sealed or capped to prevent moisture ingress. *Exel™ Lead in Line* has a maximum shelf life of 2 years but should be used within 3 months after tube sealing is broken.

As *Exel™ Lead in Line* is designed as a reel off, extendable product, unfired remnant product which cannot be used, should be disposed of by unreeling from the spool and by appropriate initiating. Firing of *Exel™ Lead in Line* on the spool may result in a fire hazard.

Safety

Please refer to the latest revision of the Orica *Exel™* Safety Data Sheet for specific guidance.

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