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. The signal tube is supplied on spools and closed at both ends. Exel™ Lead in Line enables long lead extension of Exel™ Connectadet.

Technical Properties

<table>
<thead>
<tr>
<th>Product</th>
<th>Exel™ Lead in Line</th>
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<tbody>
<tr>
<td>Signal tube</td>
<td>Yellow Exel™</td>
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<tr>
<td>- Outer diameter (mm)</td>
<td>3 mm</td>
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<tr>
<td>- Nominal tensile strength</td>
<td>25 kg (+20°C / 2 min)</td>
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<tr>
<td>- Length of spool (m)</td>
<td>750, 1500 or 3000</td>
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Recommendations for Use
Always make cuts and splices under clean, dry conditions and always cap open tube ends. Always use a sharp, single bladed cutter or knife. 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. Exel™ Lead in Line should not be used in extremely wet conditions where the maintenance of dry splices cannot be guaranteed. When making up splices, push the cut ends firmly into the splice. Check that the tube ends have no more than 10 mm separation in the spliced join.

Ensure that no strain is placed on any spliced joins during deployment. A simple overhand knot, refer to figure 1, 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 splices cannot be guaranteed as waterproof even when taped. Exel™ Lead in Line can be reliably initiated by Exel™ Start DS2.

Initiating Blasts
Lay out the Exel™ Lead in Line tube from the initiation point to a safe blast firing point. At the initiation point, cut the Exel™ Lead in Line 200 mm from the tube end. Similarly cut an Exel™ surface connector 200 mm from the tube end. Splice the Exel™ Lead in Line to the detonator tubing. Connect the detonator to the initiation point of the blast.

At the firing point, when cleared to fire, cut the Exel™ Lead in Line tube free from the spool. Promptly place the end of the Exel™ Lead in Line into the starter device. The tube end of the Exel™ Lead in Line must be sealed with adhesive tape to prevent water/moisture to intrude during storage. Operate the starter as per the manufacturer's instructions.
Packaging
Exel™ Lead in Line is supplied on spools. A standard cardboard outer case contains 2 of these sealed spools and clear plastic tube for splicing.

The box dimensions are 40cm (L) x 28cm (W) x 25cm (H).

Spools with shock tube are available with 750, 1500 or 3000m length. Other length may be available upon request. Please contact your Orica representative for more information.

Storage and Handling
Product Classification
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.

Disposal
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 initiating appropriately. Firing of Exel™ Lead in Line on the spool may result in a fire hazard.

Safety
Exel™ signal tubing provides a high level of safety against initiation by static electricity, stray electrical currents and radio frequency transmissions.

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