NONEL® Starter™

Description
NONEL Starter is used as a lead-in line from a safe firing position to the blasting location. A NONEL Starter consists of a length of NONEL tube sealed at one end and a NONEL detonator and connector block attached at the other end.

Application
NONEL Starter can be used to initiate blasts with NONEL detonators or detonating cord.

Features & Benefits
NONEL Starter provides a high level of safety against accidental initiation by stray electrical current, radio transmissions or static electricity.

Technical Information

Properties

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Yellow</td>
</tr>
<tr>
<td>Tube</td>
<td>Standard</td>
</tr>
<tr>
<td>Tube diameter (mm)</td>
<td>3 (external)</td>
</tr>
<tr>
<td>Velocity of Detonation (m/s)</td>
<td>2100 +/- 300</td>
</tr>
<tr>
<td>UV Block capacity</td>
<td>10 std NONEL tubes</td>
</tr>
</tbody>
</table>

Hazardous Shipping Description
Detonator Assemblies, Non-electric for Blasting, 1.1B, UN 0360

Packaging

<table>
<thead>
<tr>
<th>Length (m)</th>
<th>Reels / Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>16 reels</td>
</tr>
<tr>
<td>300</td>
<td>4 reels</td>
</tr>
<tr>
<td>500</td>
<td>4 reels</td>
</tr>
</tbody>
</table>
NONEL® Starter

Recommendations

Connection – The NONEL Starter tube must never be unreeled while it is connected to the surface initiation system. Unreel the NONEL Starter to the safe firing position then hook up the connector block to the NONEL tube or Detonating cord.

When inserting NONEL tube into the connector block, ensure the inside of the block is free from dirt or similar obstacles that may interfere with the function. Connections should always be made in the direction of the initiation sequence.

Ensure that all the tubes are well inside the block and parallel to the detonator. Close the first lid at the end of the block while holding the tubes in position. If necessary, adjust the tubes to be straight, parallel and evenly distributed over the detonator. Close the second lid while keeping the tubes in position. All tubes are now secure and in close contact to the detonator. A maximum of ten (10) standard NONEL tubes can be placed into the block.

Place the NONEL connector block with the lids facing downwards. This will stop material from entering the block preventing good contact between tube and detonator when the block is covered by drill cuttings.

After checking connection, cover block with drill cuttings or similar material to prevent shrapnel from cutting off other tubes.

The NONEL Starter lead-in line should be initiated with a starter unit designed for use with signal tube. The sealed end should be cut immediately before NONEL Starter is connected to DynoStart™ or a NONEL Starter Gun.

NEVER connect NONEL tubes and detonating cord together in the same NONEL connector block.

Water Resistance – NONEL Starter provides very high water resistance.

Temperature Range - NONEL Starter can be used as described on this technical information sheet in ambient temperatures ranging from -40°C to +70°C.

Shelf Life – NONEL Starter has a recommended shelf life of three (3) years, when transported and stored in a sealed box under ideal conditions.

Safe handling, transportation and storage

First Aid – You can find detailed first aid information on the relevant Dyno Nobel Safety Data Sheet. Refer to www.dynonobel.com for more information if required.

Safety - All explosives are classified as dangerous goods and can cause personal injury and damage to property if used incorrectly.

Transportation and Storage - All explosives must be handled, transported and stored in accordance with all relevant regulations. Stock should be rotated such that older product is used first.

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