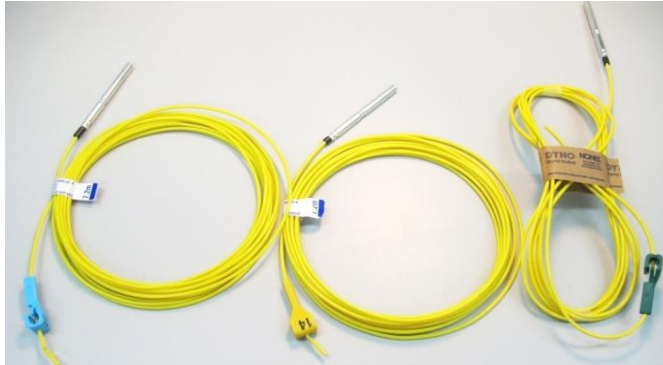


NONEL® LP Series

Technical
Information



Product Description

NONEL® nonelectric delay detonator LP units consist of a length of yellow shock tube sealed at one end and having a high strength detonator crimped to the other. A colour-coded J-Hook, with pad-printed delay period, is affixed near the sealed end, providing easy means of connection to detonating cord.

NONEL LP units are designed to provide in-hole delays for underground (non-coal) or special construction blasting applications that require long period delay times to improve relief and fragmentation (such as drift development, shaft raising/sinking, stope applications or tunnelling rounds). They are typically used with detonating cord.

Features and Benefits

The NONEL LP detonator provides increased water hammer resistance in blasting applications where saturated ground conditions exist. The NONEL LP shock tube exhibits excellent handling characteristics and enables longer sleep times down the hole. The NONEL LP Series has a colour-coded stamped cord clip for easy identification.

Properties

Period / Delay Time (msec)	J-Hook Colour	Period / Delay Time (msec)	J-Hook Colour
0 / 25	White	10 / 3500	Purple
1 / 500	Red	11 / 3900	Light Blue
2 / 800	Blue	12 / 4400	Dark Green
3 / 1100	Brown	13 / 4900	Mauve
4 / 1400	Orange	14 / 5400	Mustard
5 / 1700	Aqua	15 / 5900	Crimson
6 / 2000	Gold	16 / 6500	Yellow
7 / 2300	Lime Green	17 / 7200	Dark Blue
8 / 2700	Pink	18 / 8000	Green
9 / 3100	Black		

Hazardous Shipping Description

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



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Application Recommendations

ALWAYS use the plastic J-Hook when using a detonating cord trunkline to tie-in NONEL LP nonelectric delay detonators. A minimum 3.6 g/m (18 gr/ft) detonating cord trunkline is required for use with the J-Hook.

ALWAYS ensure the shock tube is connected at right angles to the detonating cord trunkline and that the shock tube leads returning to the hole collar do not cross over or lay near any detonating cord trunkline. If the detonating cord touches the shock tube or is closer than 15 cm (6 inches), the shock tube may be damaged and misfires may result.

ALWAYS connect detonating cord using approved knots and tight connections. Place detonating cord hook-ups in closed loops and use with cross-ties.

NEVER cut or trim seals from the shock tube of a NONEL LP delay. If shock tubing is cut or is suspected of being cut or damaged during loading, **ALWAYS** reprime the blast-hole using a new unit of the same delay period.

NEVER drive any equipment over shock tube or detonating cord. Whenever charging from a manoeuvrable basket, platform or boom, **ALWAYS** make sure that no shock tube or detonating cord is entangled or can become entangled.

ALWAYS make sure that no shock tube or detonating cord can be pinched between the basket, platform or boom and the face, ribs, back or floor. Rupturing or damaging shock tube or detonating cord may cause misfires.

Application Recommendations (continued)

Sleep Time - The sleep time of the NONEL LP Series is dependent on the temperature and type of explosive in contact with the unit. Please contact Dyno Nobel for further information.

Water Resistance - The NONEL LP Series provides excellent water resistance.

Ground Temperature - The NONEL LP Series can be safely used in ground with a temperature range of -40°C to +70°C.

Shelf Life - For maximum shelf life (3 years), NONEL LP units must be stored in a cool, dry, well ventilated magazine. Explosive inventory should be rotated. Avoid using new materials before old stocks have been depleted.

Packaging

Length (m)	Case Count	Configuration
3.6	250	Coil
4.8	200	Coil
5.4	180	Sidewinder
6.0	150	Coil
7.2	150	Coil
15	75	Figure 80

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Application of NONEL LP Sidewinder® Series



Sidewinder® is the winding configuration for NONEL LP series 5.4m. It has been specifically designed to reduce the occurrence of tangling of this shorter tube length on deployment. Each bundle holds 5 Sidewinder® coils.

- Step 1.** Hold the bundle of five (5) Sidewinder coils by the loop where detonator bases are pointing down and facing away from your body.
- Step 2.** To separate the five (5) Sidewinder coils, remove the rubber band. Leave each tube coiled within its Sidewinder sleeve.
- Step 3.** Make up primer according to mine standards.
- Step 4.** Push the primer into the hole. The tube will unravel from its sleeve. The remainder of the tube will remain in the sleeve, thus preventing loose tubes hanging down the face.
- Step 5.** To complete deployment of unit, hold clip and pull the tube from its sleeve.

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.

Product Disclaimer The explosive products discussed in this document should only be handled by persons with the appropriate technical skills, training and licences. While Dyno Nobel has made every effort to ensure the information in this document is correct, every user is responsible for understanding the safe and correct use of the products. If you need specific technical advice or have any questions, you should contact your Dyno Nobel representative. This information is provided without any warranty, express or implied, regarding its correctness or accuracy and, to the maximum extent permitted by law, Dyno Nobel expressly disclaims any and all liability arising from the use of this document or the information contained herein. It is solely the responsibility of the user to make enquiries, obtain advice and determine the safe conditions for use of the products referred to herein and the user assumes liability for any loss, damage, expense or cost resulting from such use. © DYNO, GROUNDBREAKING PERFORMANCE, NONEL and SIDEWINDER are registered trademarks of the Dyno Nobel / Incitec Pivot Group. ™ LEAD LINE, EZTL, DYNOSTART, STARTER and the Loop device are trademarks of the Dyno Nobel / Incitec Pivot Group. © Dyno Nobel Asia Pacific Pty Limited 2018 Reproduction without permission strictly prohibited.