NONEL® MS HD Series

Technical Information

Description

NONEL® nonelectric delay detonator MS HD units consist of a length of heavy duty orange shock tube with a high strength detonator attached to one end and the other end sealed. A J-Hook prominently displaying the nominal time is affixed near the sealed end, providing easy means of connection to detonating cord.

Designed to be used in demanding environments, NONEL MS HD provides in-hole delay time for underground (non-coal) and surface blasting applications in the mining, quarry and construction industries and can be used in combination with a detonating cord trunkline, NONEL MS Connectors and NONEL EZTL™ detonators for maximum timing flexibility.

Features and Benefits

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

Properties

Period / Delay Time (msec)	J-Hook Colour	Period / Delay Time (msec)	J-Hook Colour
1 / 25	Red	15 /375	Crimson
2 / 50	Blue	16 / 400	Yellow
3 / 75	Brown	17 / 425	Dark Blue
4 / 100	Orange	18 / 450	Green
5 / 125	Aqua	19 / 475	Orange
6 / 150	Gold	20 / 500	White
7 / 175	Lime Green	21 / 550	Dark Red
8 / 200	Pink	22 / 600	Grey
9 / 225	Black	23 / 650	Black
10 / 250	Purple	24 / 700	Dark Brown
11 / 275	Light Blue	25 / 750	Red
12 / 300	Dark Green	26 / 800	Blue
13 / 325	Mauve	27 / 900	Brown
14 / 350	Mustard	28 / 1000	Orange

Hazardous Shipping Description

Detonator assemblies, nonelectric, 1.1B, UN 0360

Version 5
February 2018

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DYNO® Dyno Nobel
Groundbreaking Performance®

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Recommendations

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

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 6 inches (15 cm), 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 MS HD detonator. If shock tubing is cut or is suspected of being cut or damaged during loading, reprime the blasthole using a new unit of the same delay period.

NEVER drive any equipment over the shock tube or detonating cord.

Whenever charging from a manoeuvrable basket, platform or boom or when stemming, **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 or jigs, platform or boom and the face, ribs, back or floor or while loading or stemming process. Rupturing or damaging shock tube or detonating cord may cause misfires.

Maximum Hole Depth - This product is ideally used for holes from 18m to 80m deep, although longer depths can be accommodated.

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

Water Resistance - The NONEL MS HD Series provides excellent water resistance.

Recommendations (continued)

Ground Temperature - The NONEL MS HD 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 MS HD Series must be stored in a cool, dry, well ventilated magazine. Explosive inventory should be rotated. Avoid using new materials before the old.

Packaging

Length (m)	Units/case	Configuration
12	90	Figure 80
15	75	Figure 80
18	60	Figure 80
24	40	Figure 80
30	30	Spool
36	30	Spool
45	30	Spool
60	30	Spool
80	30	Spool

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Safe handling, transportation and storage

First Aid - Detailed first aid information regarding this product is contained on the relevant Dyno Nobel Material Safety Data Sheet.

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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