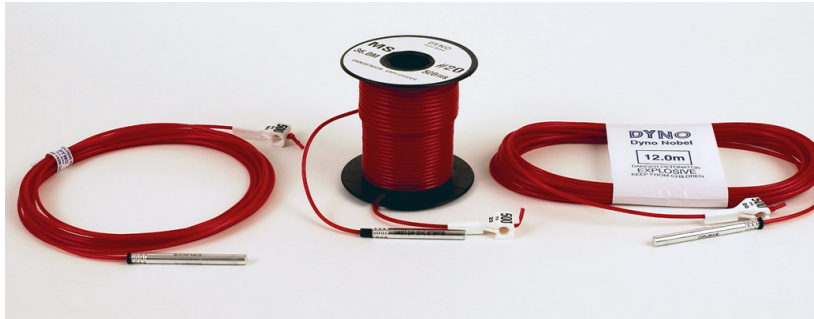


NONEL[®] MS Series

Technical
Information



Description

The NONEL[®] MS detonator is a millisecond, high strength delay detonator series featuring 28 delays ranging from 25 to 1000 milliseconds.

Application

The MS Series provides an excellent downhole initiating system appropriate for all mining applications. When used in conjunction with surface delays, the MS gives effective and accurate downhole timing sequences.

Features & Benefits

- The NONEL MS detonator provides increased water hammer resistance in blasting applications where saturated ground conditions exist.
- The NONEL MS shock tube exhibits excellent handling characteristics and enables longer sleep times down the hole.
- The NONEL MS detonator can be used as a starter line or used in conjunction with Lead Line to initiate blasts.
- The NONEL MS series has a colour-coded stamped cord clip for easy identification.

Properties

Explosives Class: 1.1B

U.N. No: 0360

High strength detonator
NONEL tube colour
NONEL Cobra[®]
NONEL tube diameter (mm)
NONEL Cobra[®]
NONEL tube VOD (m/sec)

No. 12 Strength
Red (STD)
Orange (HD)
3.0 (STD)
3.0 (HD)
2100 ± 300

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Packaging

Length (m)	Units/Case	Configuration
6.0	150	Coiled
7.2	150	Coiled
9.0	100	Coiled
12.0	75	Sleeved
15.0	75	Sleeved
18.0	50	Sleeved
24.0	50	Spooled
30.0	30	Spooled
36.0	30	Spooled
45.0	30	Spooled
60.0	30	Spooled
80.0	30	Spooled

Delay Period	Nominal Firing Time (ms)	Time Between Delays (ms)
1	25	
2	50	25
3	75	25
4	100	25
5	125	25
6	150	25
7	175	25
8	200	25
9	225	25
10	250	25
11	275	25
12	300	25
13	325	25
14	350	25
15	375	25
16	400	25
17	425	25
18	450	25
19	475	25
20	500	25
21	550	50
22	600	50
23	650	50
24	700	50
25	750	50
26	800	50
27	900	100
28	1000	100

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Recommendations

Use - It is recommended that the MS Series be used as a single inhole delay in conjunction with the EZTL detonator surface initiation system. This will provide adequate downhole delay time in most blasting applications and minimises inventory requirements. The MS series can also provide hole-by-hole delay sequencing by utilising the downhole delay series in conjunction with detonating cord and MS connectors. It is recommended to use either 3.6 g/m or 5 g/m detonating cord to initiate the NONEL tube.

Water Resistance - The MS series provides excellent water resistance.

Temperature Range - The MS Series can be safely used in temperatures ranging between -40 °C and + 70°C.

Shelf Life - The NONEL MS detonator has a recommended shelf life of two (2) years, when transported and stored under ideal conditions. Accuracy of delay detonators may deteriorate with age and stocks should be rotated regularly.

Sleep Time - The sleep time of the MS detonator series, is dependent on the temperature and type of explosive in contact with the unit. Please contact Dyno Nobel for further information.

Safe handling, transportation & 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.

The information and suggestions contained in this document concern explosive products that should only be dealt with by persons having the appropriate technical skills, training and licence. The results obtained from the use of such products depend to a large degree on the conditions under which the products are stored, transported and used.

While Dyno Nobel makes every effort to ensure the details contained in the document are as accurate as possible, the conditions under which the products are used are not within its control. Each user is responsible for being aware of the details in the document and the product applications in the specific context of the intended use. If technical advice is required in the specific application of the products then you should contact Dyno Nobel for assistance.

Dyno Nobel makes no warranties in relation to the products it sells other than those implied by law. Except to the extent determined by law, Dyno Nobel bears no risk, responsibility or liability arising from the use of the products and the information in this document by the buyer or user of the products.

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