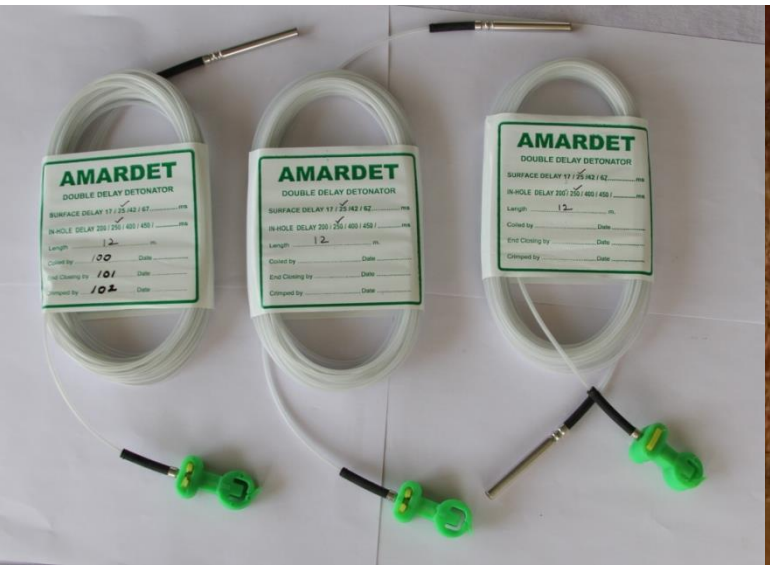
ISO 9001 REGISTERED

DNV Certification B.V., The Netherlands

Premier Explosives limited

AMARDET

SHORT DELAY DETONATORS (MS Series)



Product Description : Amardet Short Delay Detonators (ms series) are specially designed for initiation of cap-sensitive explosives / booster in underground metal mines. The product is non-electric.

The system consists of a shock tube of required length with a delay detonator at one end while the other end is provided with a DF connector. The free end of the shock tube is sealed to protect against moisture. The detonator is of No.8 strength.

The delay timing is printed on the DF connector and a tag is also attached for ready reference.

Shock Tubes used are double layered designed for tough field conditions, having excellent resistant to abrasion to hot and cold explosive mixtures.

Application : Amardet Short Delay Detonators (MS series) are mainly used in underground metal mines for blasting in tunnels, stopping etc. The product is also useful for blasting in civil construction projects specially in tunnels for controlled blasting.

Safety : Amardet Short Delay Detonators (MS series) provide high level of safety against initiation by static electricity, stray electrical currents and radio frequency transmission.

These detonators have sensitive components inside the detonator. Care should be taken not to cause initiation due to impact, friction or heat.

Specifications

Shell Material	Aluminium
Shell Length	42 – 77 mm
Detonator strength	No.8
Water Resistance	Excellent
VOD (m/sec)	1800 +/- 100 mtrs / sec
Shelf Life	Not more than 2 years under recommended storage conditions

Advantages:

•Being non electric system, is immune to extraneous electricity sources such as stray current, static electricity charges and radio frequency energies.

•It also eliminates the risk of misfires due to damaged lead wires in electric detonators in conductive are bodies and watery drill holes.

•Tube is non-disruptive as the detonation is contained within the tube, unlike detonating cord which generates brisance. Does not cause de-sensitization of booster sensitive explosive.

•Initiates the explosive at a single point in the drill hole and detonating travels along the explosive column.

•Use of Amardet Short delay Detonators improve fragmentation. Reduces maximum charge per delay and thus the peak particle velocity. Above all it is easy to connect, does not form any kinks.

Recommendations:

The sealed ends of Amardet Short Delay detonators should not be cut. Kink should not be formed on the tube during charging operations.

Ensure the shock tubes in connected at right angle and that the shock tubes do not cross over or lay near another shock tube. If the tubes are closer, one may damage the other upon initiation. Misfires can also result.

Never drive any vehicle over the shock tube.
Ensure the tubes are not damaged while charging.
Two manufacturer's product should not be used in a blast.

Packaging :

Amardet in-hole delays are supplied in coil, packed in polythelene wrappers which are packed in fibre board boxes.

Tube length (M)	Nos / Case
Upto 4	400
5 to 10	250
11 to 18	200

Order Instructions:

Amardet in-hole delay detonators should be ordered as shown below to provide full and complete information:-
Amardet (DTH) 25* / 5 **

** Delay Period of in hole delay detonator in milliseconds.*
*** Length of shock tube in Mtr.*

Storage:

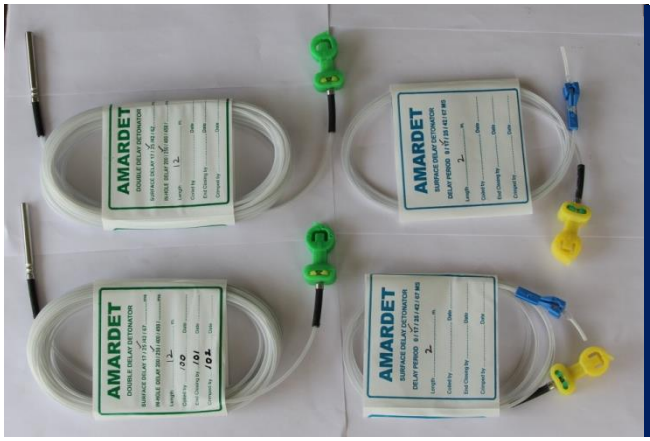
•Should be handled by qualified and authorized persons only.

•Store under dry conditions in a well ventilated approved detonator magazine.

•Do not drop and do not smoke near detonators.

Classification:

PESO : Class 6, Division 3
UN No. : 1.1 B 0029



Delay Timing

Delay No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Delay Timing (ms)	1	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500