

ELECTRIC SUPER™ MS

New Series

Technical
Information



Electric Millisecond Delay Detonator



Product Description

ELECTRIC SUPER MS is a high strength, millisecond delay electric detonator featuring 30 delay periods designed to provide precision and accuracy in all delay periods. The ELECTRIC SUPER MS legwires are HDPE insulated, which offers excellent resistance to cuts, abrasion, oil, low temperature and high humidity. Easy-to-read delay tags display the delay number and nominal firing time of each period near the legwire ends.

Field results with the ELECTRIC SUPER MS have shown impressive improvements in both vibration control and fragmentation.

Recommended firing current:

- Series wiring: a minimum of 2 amps AC or 1.5 amps DC
- Parallel wiring: a minimum of 1 amp AC or DC per detonator
- Series-in-parallel wiring: a minimum of 2 amps AC or 1.5 DC per series

The maximum recommended continuous firing current is 10 amps per detonator.

Properties

SDS
#1178

Shell Material	Aluminum
Shell Length (range)	58 to 93 mm 2.28 to 3.6 in
Maximum Water Pressure	60 PSI 8 hrs
Shelf Life Maximum	5 years (from date of production)
Maximum Usage Temperature	66°C (150°F)
Net Explosive Content	0.10 kg 0.220 lb per 100 units

Delay Period	Nominal Firing Time (msec)	Delay Period	Nominal Firing Time (msec)	Delay Period	Nominal Firing Time (msec)
0	0	9	225	18	450
1	25	10	250	19	475
2	50	11	275	20	500
3	75	12	300	22	600
4	100	13	325	24	700
5	125	14	350	26	800
6	150	15	375	28	900
7	175	16	400	30	1000
8	200	17	425		

Hazardous Shipping Description

Detonators, Electric, 1.4B, UN0255 PGII
EX 2006030288—Kirked



ELECTRIC SUPER™ MS

New Series

Technical Information



Application Recommendations

- **NEVER** use the ELECTRIC SUPER MS with other types of Dyno Nobel electric detonators or electric detonators from another manufacturer. Wiring different brand electric detonators together in a blast circuit may result in misfires and is in violation of federal regulations. Even though some types of Dyno Nobel electric detonators are electrically compatible, they should never be planned to be used together as a standard blasting practice. Where special circumstances demand a larger number of standard delay periods, always contact a Dyno Nobel representative for specific recommendations before planning the blast design.
- **NEVER** use electric detonators near radio frequency transmitters unless in accordance with IME SLP 20.

Radio Frequency Hazard Alert

- When blasting with electric detonators, no personal communication equipment of any type should be on the blast site regardless of whether it is on or off. This includes but is not limited to: portable / hand held radios, radio modems, pagers, mobile and cell phones.
- Radio-Frequency (RF) transmitters include but are not limited to: AM and FM radio; television, radar; cellular phones and other devices that are cellular based (i.e., on-board vehicle systems like “On Star”); wireless data acquisition systems; personal data devices such as “Palm Pilots” and “Pocket PCs” with built-in cellular phones or communication systems; Pagers; and Global Positioning Systems (GPS) base stations.
- Refer to the Institute of Makers of Explosives Safety Library Publication #20 for distance / wattage parameters and guidance when using two-way radios and cell phones near electric detonators.

Transportation, Storage and Handling

- ELECTRIC SUPER MS must be transported, stored, handled and used in conformity with all federal, state, provincial and local laws and regulations.
- For maximum shelf life (5 years), ELECTRIC SUPER MS must be stored in a cool, dry, well ventilated magazine. Explosive inventory should be rotated. Avoid using new materials before the old. For recommended good practices in transporting, storing, handling and using this product, see the booklet “Prevention of Accidents

- in the Use of Explosive Materials” packed inside each case and the Safety Library Publications of the Institute of Makers of Explosives.
- The disposable shipping tray is not part of the legal shipping package and is used only to prevent “relative motion” while in transit. If the tray is not used, it is mandatory that all explosives shipments are properly blocked and braced.

Packaging

Length		Case Weight		Wire Configuration	Quantity per		Product Code
m	ft	lb	kg		Case	NEQ (g)	
4.9	16	4.4	2.2	Short Fold	35	35	ECMSxxxx016A
6.1	20	5.3	2.4	Short Fold	35	35	ECMSxxxx020A
7.3	24	5.9	2.7	Short Fold	35	35	ECMSxxxx024A
9.1	30	6.6	3.0	Long Fold	15	15	ECMSxxxx030A
12.2	40	6.6	3.0	Long Fold	15	15	ECMSxxxx040A
18.3	60	6.6	3.0	Long Fold	10	10	ECMSxxxx060A
24.4	80	7.7	3.5	Long Fold	10	10	ECMSxxxx080A

All ELECTRIC SUPER MS 24' and less, have 22 AWG (0.6 mm) copper wire

All ELECTRIC SUPER MS 30' and more, have 20 AWG (0.8 mm) copper wire

xxxx = delay time in milliseconds

Case Dimensions

286 x 194 x 127 mm 11 ¼ x 7 ⅝ x 5 in

Electrical Data		Electrostatic Sensitivity	
No Fire Current	0.25 amps	Double Wire to Shell	10 kV/300 pF/15 mJ
All Fire Current	1.00 amps	Pin to Pin	10 kV/300 pF/15 mJ
Series Ignition Current	1.50 amps		
No Fire Impulse	2.5 mJ/ohms		
All Fire Impulse	5.5 mJ/ohms		

Product Disclaimer Dyno Nobel Inc. and its subsidiaries disclaim any warranties with respect to this product, the safety or suitability thereof, or the results to be obtained, whether express or implied, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR OTHER WARRANTY. Buyers and users assume all risk, responsibility and liability whatsoever from any and all injuries (including death), losses, or damages to persons or property arising from the use of this product. Under no circumstances shall Dyno Nobel Inc. or any of its subsidiaries be liable for special, consequential or incidental damages or for anticipated loss of profits.

Dyno Nobel Inc.

2795 East Cottonwood Parkway, Suite 500, Salt Lake City, Utah 84121 USA
Phone 800-732-7534 Fax 801-328-6452 Web www.dynonobel.com

DYNO
Dyno Nobel

Groundbreaking Performance