



# MORTAR AMMUNITION



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**MUNITIONS INDIA LIMITED**  
(A Government of India Enterprise)

Munitions India Limited [MIL] is a Defence Public Sector Enterprise [CPSE] under the Ministry of Defence, Government of India.

MIL, the India's biggest manufacturer and market leader is engaged in Production, Testing, Research & Development and Marketing of comprehensive range of ammunition & explosives for Army, Navy, Air force & Para-Military Forces.

With Corporate Office at Pune (India), MIL in its 12 state-of-the-art manufacturing units located across the country employs skilled workforce of around 25,000. These factories have proven integrated base for production of Small, Medium & High calibre ammunition, Mortars, Rockets, Hand Grenades etc. with in-house manufacturing of Initiatory Compositions, Propellants and High Explosives for over 150 years. Our primary objective is to provide competitive edge to the Armed Forces by equipping them with modern and quality battlefield ammunition.

Our foreign customers include countries located in North America, South America, Europe, Africa and Asia. The patronage we receive from our customers both in India and abroad reflects their faith in quality of our products and services. We are the force behind the Armed Forces.

## **MIL with its 12 manufacturing units provide :**

- A broad and versatile production base with multi-technology capabilities
- State-of-the-art manufacturing facilities
- Large pool of skilled and professionally qualified manpower and managerial personnel
- Strict adherence to quality standards (all units are ISO-9000 certified)
- Original as well as adaptive Research & Development to make need-base refinement and modifications
- A strong base for industrial training & testing

# MORTAR BOMB 51MM HE



## PURPOSE:

Mortar Bomb 51 mm HE is designed for use as Area Targeted / Anti-personnel. It explodes immediately on impact and is effective against troops, soft-skinned vehicles, and light shelters. It is muzzle-loaded and fin-stabilized, fired at a low muzzle velocity and employed for high-angle firing in a short span of time. It is fired from a 51 mm mortar weapon.

## CHARACTERISTICS:

- |  |                    |
|--|--------------------|
| ● Mass of the Filled Bomb              | 850 g              |
| ● Maximum dia                          | 50.7 ± 0.1 mm      |
| ● Filling type (Standard)              | TNT                |
| ● Length of Bomb with Fuze & Tail Unit | 282.96 mm          |
| ● Filling mass                         | 215 ± 5g           |
| ● Fuze                                 | Percussion D.A. 5A |
| ● Shelf Life                           | 10 years           |

## PERFORMANCE:

- |                   |              |
|-------------------|--------------|
| ● Muzzle velocity | 101 m/s ± 10 |
| ● Minimum Range   | 1000 m       |

## PACKAGES:

Packing consists of inner and outer packages. Inner packages are HDPE/LDPE containers. 6 such containers are packed in a canvas bag with a shoulder strap. Canvas bags are then packed in a wooden box.



# MORTAR BOMB 51 MM SMOKE



## PURPOSE:

Bomb 51 mm smoke is an emission type screening smoke ammunition capable of producing effective screen over wide area. Used for facilitating tactical deployment of troops and screening from enemy fire. Bomb is fired from 51 mm mortar, smooth bore, muzzle loading weapon. Ammunition is provided with delay unit of 10 sec. to facilitate emission of the smoke just on landing on the ground.

## CHARACTERISTICS :

- |  |                                    |
|--|------------------------------------|
| ● Mass of the Filled Bomb              | 960 ± 25 g                         |
| ● Maximum dia                          | 50.85 mm                           |
| ● Filling type (Standard)              | Plasticized White Phosphorous      |
| ● Length of Bomb with Fuze & Tail Unit | 282 ± 1mm                          |
| ● Filling mass                         | 450 g (approx.)                    |
| ● Fuze                                 | Percussion D.A. No. 162 MK-8 (M-2) |
| ● Colour of smoke                      | White                              |
| ● Shelf Life                           | 10 years                           |

## PERFORMANCE :

- |                                   |              |
|-----------------------------------|--------------|
| ● Muzzle velocity                 | 101.0 m/sec  |
| ● Minimum Range                   | 830 m (max)  |
| ● Duration of screening smoke     | 120 Sec. min |
| ● Time required to build up smoke | 10 Seconds   |

## PACKAGES :

Packing consists of inner and outer packages. Inner packages are HDPE/ LDPE containers. 6 such containers are packed in canvas bag with shoulder strap. Canvas bags are then packed in wooden box.





# MORTAR BOMB 51 MM ILLG



## PURPOSE:

Bomb 51 mm Illuminating belongs to the family of Illuminating ammunition extensively used to support night warfare. The bomb provides enough illumination to support infantry for combats, aerial photography and army movements. Bomb is fired from 51 mm mortar, smooth bore, muzzle loading weapon.

## CHARACTERISTICS :

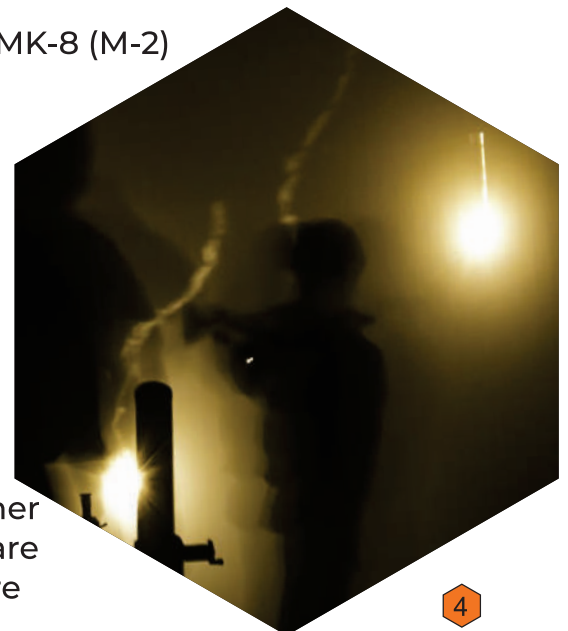
- Mass of the Filled Bomb 930 ± 25 g
- Maximum dia 50.7 -0.1 mm
- Length of Bomb 283 ± 2mm
- Filling mass 215 g (approx.)
- Fuze Percussion D.A. No. 162 MK-8 (M-2)
- Shelf Life 10 years

## PERFORMANCE :

- Muzzle velocity 115 ± 2.5 m/s
- Minimum Range 300 to 900 meters
- Height of burst 600 m. (Optimum)
- Time of burning 30 Sec.( min)
- Area of illumination 600 m (radius)
- Luminosity 2.5 Lakh Candela (min)

## PACKAGES :

Packing consists of inner and outer packages. The inner package is HDPE/LDPE container. 6 such containers are packed in a canvas bag with shoulder strap. 4 bags are then finally packed in a steel/ wooden box. B8A.



# MORTAR BOMB 81 MM HE



## PURPOSE:

Mainly used for firing at troops in the open and enemy assembly areas, which cannot be engaged by flat trajectory. Very effective for counter mortar task and enemy position on reverse slope of mountains.

## CHARACTERISTICS :

- Mass of the Filled Bomb 4.4 kg  $\pm$  0.125 kg
- Maximum dia 80.60  $\pm$  0.1 mm
- Filling type (Standard) TNT Grade 1 E
- Length of Bomb with Fuze & Tail Unit 379 mm (Max.)
- Filling mass 705  $\pm$  5g
- Fuze 162 MK-8 (MK-1)
- Shelf Life 10 years

## PERFORMANCE :

- Muzzle velocity 305 m/s  $\pm$  10
- Minimum Range 5000 m

## PACKAGES :

Two Bombs Packed in One Plastic Carrier 10C  
Further Two Carriers 10C Packed in One Carrier 13A (Steel).



# MORTAR BOMB 81 MM SMOKE



## PURPOSE:

Basically, a smoke type screening Ammunition. Achieves a dense smoke screen for facilitating tactical deployment of troops and screening from enemy observation and aimed fire.

## CHARACTERISTICS :

- |  |                                    |
|--|------------------------------------|
| ● Mass of the Filled Bomb              | 4.31Kg to 4.51 Kg                  |
| ● Maximum dia                          | 80.60 ± 0.1 mm                     |
| ● Filling type (Standard)              | Plasticized White Phosphorous      |
| ● Length of Bomb with Fuze & Tail Unit | 379 mm approximately               |
| ● Filling mass                         | 0.500 ± 0.025 kg                   |
| ● Fuze                                 | Percussion D.A. No. 162 MK-8 (M-1) |
| ● Colour of smoke                      | White                              |
| ● Shelf Life                           | 10 years                           |

## PERFORMANCE :

- |                                   |             |
|-----------------------------------|-------------|
| ● Muzzle velocity                 | 300 m/sec   |
| ● Minimum Range                   | 5000 Meters |
| ● Duration of screening smoke     | 25 Seconds  |
| ● Time required to build up smoke | 5 Seconds   |

## PACKAGES :

Two Bombs Packed in One Plastic Carrier 10C Further Two Carriers 10C Packed in One Carrier 13A (Steel).



# MORTAR BOMB 81 MM ILLG



## PURPOSE :

It is an illuminating Mortar Ammunition. It is fired from 81mm mortar, smoothbore, muzzle loading weapon. On firing, the gas pressure from the Primary Cartridge and Augmenting Cartridges propel the Bomb. The explosive charge contained in magazine of the fuze ignites the Buster Bag which in turn ignites the star / Candle through hole provided in the metallic disc (Baffle Plate) placed below.

## CHARACTERISTICS :

- Mass of the Filled Bomb 3.85 kg
- Maximum dia 86.6 ± 0.1 mm
- Length of Bomb 552 mm
- Filling mass 880 gm (approx)
- Fuze 162 MK-8 (MK-1)
- Shelf Life 10 years

## PERFORMANCE :

- Muzzle velocity 295 m/s
- Minimum Range 5000 m (max)
- Height of burst 600 m. (Optimum)
- Time of burning 40.0 sec. (min)
- Area of illumination 600 m (radius)
- Luminosity 9 Lakh Candela (min)

## PACKAGES :

Packing consists of inner & outer packages. The inner package is HDPE/LDPE carrier 17 A which accommodates 2 bombs. 2 such packages are then put in a carrier 16 A.





# MORTAR BOMB 120 MM HE



## PURPOSE :

Mainly used for firing at troops in open areas and enemy assembly areas which cannot be engaged by flat trajectory weapons, very effective for counter mortar task and enemy position on reverse sloped mountains.

## CHARACTERISTICS :

- Mass of the Filled Bomb 13.4 Kg
- Maximum dia 118.70 mm
- Filling type (Standard) TNT
- Length of Bomb with Fuze & Tail Unit 674.64 mm approximately
- Filling mass 2.488 kg  $\pm$  0.08 Kg
- Fuze 162 MK- 9 M-1
- Shelf Life 10 years

## PERFORMANCE :

- Muzzle velocity 335 m/sec approximately
- Minimum Range Not less than 6500 Meters

## PACKAGES :

One Bomb Packed in Container 63A Further Two Containers 63A Packed in Box B7A (Steel).



# MORTAR BOMB 120 MM SMOKE



## PURPOSE:

Basically, a smoke type screening Ammunition. Achieves a dense smoke screen for facilitating tactical deployment of troops and evading from enemy firing.

## CHARACTERISTICS :

● Mass of the Filled Bomb	13.5 Kg
● Maximum dia	118.70 mm
● Filling type (Standard)	Plasticized White Phosphorous
● Length of Bomb with Fuze & Tail Unit	674.64 mm approximately
● Filling mass	1.700±0.025kg
● Fuze	162 MK- 9 M-1
● Colour of smoke	White
● Shelf Life	10 years

## PERFORMANCE :

● Muzzle velocity	335 m/sec
● Minimum Range	6500 Meters
● Duration of screening smoke	25 Seconds
● Time required to build up smoke	5 Seconds

## PACKAGES :

One Bomb Packed in Container 63A Further Two Containers 63A Packed in Box B7A (Steel).



# MORTAR BOMB 120 MM LLGA



## PURPOSE:

Bomb 120 m illuminating belongs to the family of illuminating ammunition used extensively to support night warfare and aerial survey. The bomb is fired from 120 mm Mortar, smooth bore, Muzzle Loading Weapon. The bomb is provided with Time Mechanical Fuze which function along the trajectory at the pre-set time enabling illuminate canister supported by parachute to eject and deploy in the air.

## CHARACTERISTICS :

- Mass of the Filled Bomb 13.05 kg  $\pm$  0.20 kg
- Maximum dia 119.7 mm (max)
- Length of Bomb 677 mm (max)
- Filling mass .627 Kg (approx)
- Fuze 213 T & P MK-5 M-4
- Shelf Life 10 years

## PERFORMANCE :

- Muzzle velocity 330  $\pm$  4.30 m/s
- Minimum Range 6000 m (max)
- Height of burst 600 m. (Optimum)
- Time of burning 40.0 sec. (min)
- Area of illumination 600 m (radius)
- Luminosity 10 Lakh Candela (min)

## PACKAGES :

Packing consists of inner and outer packages. Inner packages are LP containers with steel end caps. Two such container bombs are packed in steel box B7A.



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