

60 MM MORTAR BOMB HE

This bomb is fired from 60 mm Mortar Model 1979 for use against personnel, providing fragmentation and blast effect.

DATA

COMPLETE ROUND

Weight with fuze	1.33kg.
Length with fuze	233 -243 mm.(approx)

PROJECTILE

Body material	Forged steel or Graphit cast iron
Colour	Olive drab or deep bornze green
explosive	TNT/DNN (42/58)
charge	112 gm.
fuze	MP - 7 Point detonating PAI-7 or V9P1/A2

OTHER COMPONENTS

Primary cartridge	Double base propellant WD 615 3.1 gm.
Augmenting charge	Double base propellant 5 ring shaped charges 0.10x24/48 mm each weighing 3.1 gm.
Percussion primer	No.303.
Tail unit	10 steel fins

BALLISTICS

Charge	Max. velocity (metres/sec.)
0	65 + 2
1	93 + 3
2	115 + 3
3	134 + 3
4	152 + 3
5	170 + 2
Pressure	360 kg/sq.cm.
Accuracy :	
Longitudinal PE	1/70
lateral PE	1/180
Range	2075 metres

PACKING

6 bombs packed in waterproof chip/cardboard/plastic carrier with carrying handle and 3 carriers (18 bombs) packed in a steel box;

Size of box	54.6x26.7x26.7 cm.
Weight of box	39 kg.
Colour & marking	service brown with yellow/white stencilling



60 MM MORTAR BOMB SMOKE WP P2A2

This bomb is fired from 60 mm Mortar Model 1979 and is used to produce smoke for screening and spotting purposes.

DATA

COMPLETE ROUND	
Weight with fuze	1.5kg.
Length with fuze	238.70 mm.(approx)
PROJECTILE	
Body material	Forged steel or Graphite cast iron
Colour	Sea green or Eau de nil
explosive	White Phosphorus
charge	150±20 gm. (approx).
fuze	MP - 7 (Point detonating) or V9P2/A2
OTHER COMPONENTS	
Primary cartridge	Double base propellant WD 615 3.2 gm.
Augmenting charge	Double base propellant 3 ring shaped charges 0.10x24/48 mm. each weighing 3.1 gm.
Percussion primer	No. 303.
Tail unit	10 steel fins
BALLISTICS	
Charge Max.	velocity (metres/sec.)
0	65 + 2
1	93 + 3
2	115 + 3
3	126 + 3
Pressure	260 kg/sq.cm.
Accuracy :	
Longitudinal PE	1/70
lateral PE	1/80
Range	1330 metres
PACKING	
9 bombs packed in waterproof chip/cardboard carrier with carrying handle and 2 carriers (18 bombs) packed in a steel box;	
Size of box	61.325 x 27.3 x 26.61 cm.
Weight of box	43 kg.
Colour & marking	service brown with yellow/white stencilling



60 MM MORTAR BOMB ILLUMINATING & SIGNAL (RED & GREEN)

These bombs are available in three types. Illumination bombs are used for providing illumination during night missions while signal bombs (Red & Green) are used for signalling.

DATA



COMPLETE ROUND

Weight	1kg.
Length	246 mm.(approx)
Diameter	60 mm.
Colour	White
Filler charge:	
i. Illuminating Composition	SR 562
ii. Green Signal	ISR 429 AM
iii. Red Signal	SR 406

Illuminating rounds are assembled with nylon/cotton parachute 840 mm, wide linked with a star Bi-metal wire rope covered with asbestos tube.

OTHER COMPONENTS

Primary cartridge	Double base propellant WD 615 3.2 gm.
Augmenting charge	Double base propellant one ring shaped charges 0.10x24/48 mm. weighing 3.1 gm.
Percussion primer	No.303.
Tail unit	10 steel fins

PERFORMANCE

Star ejection height	183 metres
Illuminating time:	
I) Illumination round	35 – 45 sec.
II) Signal rounds	8 – 12 sec.
Illuminating power	125,000 to 150,000 cd

PACKING

6 bombs packed in waterproof chip/cardboard carrier with carrying handle.3 carriers (18 bombs) in a steel box;

Size of box	55x26x26 cm.
Weight of box	30 kg.
Colour & marking	service brown with yellow/white stencilling

81 MM MORTOR BOMB HE M 57 D A2

These bombs are produced for use with Hotchkiss Brandt mortars, of the following types:

- i). MO- 81 -61 C Short barrel ii). MO-81-61 L Long barrel

The bomb is used against personnel and light material providing both fragmentation & blast effect.

DATA

COMPLETE ROUND	
Weight with fuze	3.2 kg.
Length with fuze	382 mm.
PROJECTILE	
Body material	Forged steel
Colour	Olive drab or deep bronze green
Explosive charge	650 gm. of TNT
Fuze	VI9PA-A2 Detonating direct action type with optional delay of 0.05 sec
OTHER COMPONENTS	
Primary cartridge	Double base propellant GB Pa 0.15x1x1 in rolled paper tubes weight 8.2 gm. (Type Z 58C)
Augmenting charge	7 horseshoe charges containing double base propellant GB Pa 0.25x2.5x2.5 each weighing 10.5 gm.
Tail unit	10 Aluminium alloy fins.
PERFORMANCE	
Velocity	291 meters/sec.
Accuracy:	
Longitudinal PE	32 metre
Lateral PE	7.5 metre
Pressure:	
Short barrel	100-510 kg/sq.cm.
Long barrel	100-570 kg/sq. cm.
Range:	
Short barrel	100-4140 metre max.
Long barrel	100-4550 metre max.
PACKING	
3 bombs packed in waterproof cardboard/plastic container with carrying handle and 2 carriers (6 bombs) packed in a steel box:	
Size of box	45.5x22.3x31.7cm.
Weight of box	29 kg.
Colour & marking	Service brown with yellow/white stencilling



81 MM MORTAR BOMB SMOKE WP

This bomb is suitable for use with Hotchkiss Brandt mortars, of the following types:

- i). MO- 81 -61 C Short barrel ii). MO-81-61 L Long barrel

It produces smoke for screening and spotting purposes,

DATA

COMPLETE ROUND

Weight with fuze	3.2 kg.
Length with fuze	382 mm.

PROJECTILE

Body material	Forged steel
Colour	Sea green or Eau de nil
Filter	white phosphorus, 650±25gm.
Fuze	V19PA-A2 Detonating direct action type with optional delay of 0.05 sec

OTHER COMPONENTS

Primary cartridges	Double base propellant GB Pa 0.15x1x1 in rolled paper tubes weighting 8.2 gm. (type Z 58C)
Augmenting charge	7 horseshoe charges containing double base propellant GB Pa 0.25x2.5x2.5 each weighing 10.5 gm.
Tail unit	10 Aluminium alloy fins.

PERFORMANCE

Velocity	291 meters/sec.
Accuracy:	
Longitudinal PE	32 metre
Lateral PE	7.5 metre
Pressure:	
Short barrel	140-570 kg/sq.cm.
Long barrel	100-570 kg/sq. cm.
Range:	
Short barrel	550-4500 metre max.
Long barrel	100-4550 metre max.

PACKING

3 bombs packed in waterproof chipboard/cardboard carrier with carrying handle and 3 carriers (9bombs) packed in a steel box:

Size of box	36x35x43cm.
Weight of box	50 kg.
Colour & marking	Service brown with yellow/white stencilling



81 MM MORTAR BOMB ILLUMINATING, SIGNAL (RED & GREEN)

CANNISTER DESIGN BUILT IN FIXED DELAY (NO FUZE)

These bombs are used with 81 mm mortar, and are available in three types i.e illuminating bombs provide illumination during night missions, while red & green bombs are used for signaling.

Illuminating rounds are assembled with nylon parachute of 1,000 mm diameter linked with a star, through a zinc/cadmium/chromium plated steel wire.

DATA

COMPLETE ROUND	
Weight	2.5 kg
Length	318 mm
PROJECTILE	
Body material	Seamless steel tube
Colour:	
Illuminating	White with a 6 mm. Wide red band near nose plug
Signal Red	White with a 12 mm. Wide red band near nose plug
Signal Green	White with a 12 mm. Wide green band near nose plug
Filler:	
Illuminating	Composition SR 562
Signal Red	Composition SR 406
Signal Green	Composition SR 429 AM
OTHER COMPONENTS	
Primary cartridge	Double base propellant GBPa 0.15x1x1 in rolled paper tubes weighing 8.2 gm
Augmenting charge	3 horseshoe type charges containing double base prop. GB Pa 0.25 x 2.5 x 2.5 each weighing 10.50 gm. for illuminating and one horseshoe type charge weighing 10 gm. for signal (red and green)
Tail Unit	10 Aluminium alloy fins
PERFORMANCE	
Illuminating	Average delay time of ejection of star 15±1.5 sec. Average time of burning of star 50±8 sec.
Signal Red & Green	Average delay time of ejection of star 6±1 sec. Average time of burning of star 10±2 sec,
PACKING	
3 bombs packed in waterproof chip/carboard carrier with carrying handle and 2 carriers (6bombs) packed in a steel box.	
Size of box	45.5 x 22.3 x 31.7 cm
Weight of box	25 kg
Colour & marking	Service brown with yellow/white stencilling



120 MM MORTAR BOMB HE M44A2

This bomb suitable for use with Mortar AM-50(Brandt) with 1.75 metre barrel length and is used against personnel and light material creating fragmentation and blast effect.

DATA

COMPLETE ROUND

Weight with fuze, pry/aug ctge	13.0 kg.(as fired)
Length with fuze	676 mm.

PROJECTILE

Body material	Forged steel
Colour	Deep bronze green
Exploder charge	C.E.
Main charge	2.6 kg. TNT
Fuze	V 19 P A2 Super quick & delay settings

OTHER COMPONENTS

Primary cartridge	CL 3 Ballistite 73 gm
Augmenting charge	7 charges of 75 gm. each of Ballistite GB Pa in cellulynl horseshoe container
Tail unit	6 steel fins

BALLISTICS

Charge	Max.velocity (metre/sec.)
0	119
1	153
2	185
3	217
4	248
5	277
6	305
7	331
Max. pressure	820 kg/sq.cm.

Chamber pressure for performance proof tests:

Strength	920 + 20 kg/sq. cm.
Charge stability	920 + 20 kg/sq. cm.
Detonation	820 kg/sq. cm.
Max. range	6745 metres

PACKING

Each round packed individually in chipboard container. Two containers (two bombs) packed in a steel box:

Size of box	81.0x29.1x15.0 cm.
Weight of box	42 kg.
Colour & marking	Service brown with yellow/white stencilling



120MM MORTAR BOMB SMOKE WP M44A1

This bomb is suitable for use with Mortar AM-50(Brandt) with 1.75 metre barrel length and produces smoke for screening and spotting purposes.

DATA

COMPLETE ROUND	
Weight with Fuze, pry/aug ctge	13.0 kg. (as fired)
Length with fuze	676 mm.
PROJECTILE	
Body material	forged steel
Colour	sea green or Eau de nil
Main charge	white phosphorus, 2.6 kg.
Fuze	V 19 P A2 Super quick and delay settings
OTHER COMPONENTS	
Primary cartridge	CL 3 Ballistite 73 gm.
Augmenting charge	7 Charges of 75 gm. each of Ballistite GB Pa in cellulynl Horseshoe container
Tail unit	6 steel fins
BALLISTICS	
Charge	Max. Velocity (metre/sec.)
0	119
1	153
2	185
3	217
4	248
5	277
6	305
7	331
Max pressure	820kg/sq. cm.
Chamber pressure for performance proof tests:	
Strength	920+20kg/sq. cm.
Charge stability	920+20kg/sq. cm.
Detonation	820 kg/sq. cm.
Max. range	6745 metres
PACKING	
Each round packed individually in chipboard container. Tow containers (two bombs) packed in a steel box:	
Size of box	81.0x29.1x15.0 cm.
Weight of box	42 kg.
Colour & marking	service brown with yellow/white stenciling

