



*Sustaining Global
Defence Productions*



**Sustaining
Defence Production,
and
enhancing transfer
of technology.**

Ammunition





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Small Arms

MPT-76 Infantry Rifle
MPT-76MH Infantry Rifle
MPT-55/55K Infantry Rifle
JMK BORA Sniper Rifle
KN12 Multi-Caliber Sniper Rifle
MAM-15 (Anti Material) Sniper Rifle
KNT-76 Semi-Automatic Sniper Rifle
PMT-76/57A Platform Machine Gun
PMT-76T/57A Platform Machine Gun
MMT Modern Machine Gun
KAAN-717 Carbine Rifle
TLS-571 Semi-Automatic Precision Rifle
T-50 Semi-Automatic Precision Rifle
HK33 E A2-A3 Infantry Rifle
STS-500 T-40 HK33 E Grenade Launcher
G3 A3-A4 Infantry Rifle
ST2 T-40 G3 Grenade Launcher
MP5 MTS A2 Silenced Submachine Gun
MP5 MTS A3 Silenced Submachine Gun
MP5 K Submachine Gun
MOT-919 Infantry Submachine Gun
MP5 A2 Submachine Gun
MP5 A3 Submachine Gun

Precision Rifles

7.62 mm KANS Grooved Hunting Rifle
7.62 mm MKE T-41 Semi Automatic Precision Rifle
5.56 mm MKE T-43 Semi Automatic Precision Rifle
9 mm MKE T-94 A2 Semi Automatic Precision Rifle
9 mm MKE T-94 A3 Semi Automatic Precision Rifle
9 mm MKE T-94 SD Semi Automatic Precision Rifle
9 mm MKE T-94 K Semi Automatic Precision Rifle





Ammunition

25 mm Ammunition

35 mm Anti-Aircraft Ammunition

40 mm x 46 Low Velocity Grenade Launcher Cartridges

40 mm x 53 High Velocity Auto. Grenade Launcher Cartridges

60 mm Mortar Ammunition

81 mm Mortar Ammunition

120 mm Mortar Ammunition

105 mm Tank Guns & Howitzer Ammunition

120 mm Tank Ammunition

155 mm & 8" Gun & Howitzer Ammunition

155 mm Extended Range Howitzer Ammunition

Small Arms Ammunition

5.56 mmx45 Cartridges Ball, Tracer, M193, Blank Polymer Type

5.56 mm Marking

5.70 mmx28 Cartridge

7.62 mmx51 Cartridges Ball, Armour Piercing, Tracer, M118, Blank, Subsonic

7.62 mmx54 Cartridges Ball, Tracer

7.62 mmx39 Cartridge with Steel Core

7.62 mmx63 Cartridge Blank

8.59 mmx70 Cartridge Ball, Solid, AP, API

7.65 mmx17 Pistol Cartridge Ball

9 mmx17 Pistol Cartridge Short

9 mmx19 Pistol Cartridges Parabellum, Blank, 115gr

9 mmx20 Pistol Cartridge Long

9 mm Marking

9.65 mm(.38 Cal.) Pistol Cartridges Ball, Special FMJ

12.7 mmx99 (.50 Cal.) Cartridges M8, M17, M20, M33, Blank

12.7 mmx99 (.50 Cal.) Cartridges Solid Sniper, AP, API Special

20 mmx102 Cartridges HEI, HEI-T, TP, TP-T, MK149 GFI APDS, API

20 mmx110 Cartridges HEI, HEI-T, TP, TP-T

0.40 Cal. Cartridges SW

0.45 Cal. Cartridges Auto

Fuzes for Ammunition

250 lb. MK 81 GP Aircraft Bomb

1000 lb. MK 83 GP Aircraft Bomb

500 lb. MK 82 GP Aircraft Bombs

2000 lb. MK 84 GP Aircraft Bombs

500 lb. MK 82-T Thermobaric Aircraft Bombs

500 lb. MK 82 Low-Collateral Aircraft Bombs

NEB/NEB-T Penetrator Bomb

4.5lb & 25lb Aircraft Training & Practice Bombs

UAV Ammunition

Shaped Demolition Charges

Ignition Charges and Primers

Block Demolition Charges

Saluting Charges

Hand Grenades

2.75" Rocket Warheads

Self-Defense Munition (MKE MOD 38)

MKE MOD 51 (M82) Primer

Propelling Charges for Howitzer Ammunition



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Small Arms Ammunition

7.65 MM x 17	BALL PISTOL CARTRIDGE
9 MM x 17	SHORT PISTOL CARTRIDGE
9 MM x 19	PARABELLUM PISTOL CARTRIDGE
9 MM x 19	115 GR PISTOL CARTRIDGE
9 MM x 19	MARKER TRAINING CARTRIDGE
9 MM x 19	BLANK PISTOL CARTRIDGE
9 MM x 20	LONG PISTOL CARTRIDGE
9.65 MM (.38 Cal)	SPECIAL (BULLET OUTSIDE) PISTOL CARTRIDGE
.45 CAL	AUTO PISTOL CARTRIDGE
.40 CAL	AUTO PISTOL CARTRIDGE
5.56 MM x 45	BALL (SS109) CARTRIDGE
5.56 MM x 45	TRACER (L110) CARTRIDGE
5.56 MM x 45	BLANK CARTRIDGE
5.56 MM x 45	POLYMER TIP CARTRIDGE
5.56 MM x 45	BALL (M193) CARTRIDGE
5.56 MM x 45	MARKER TRAINING CARTRIDGE
5.7 MM x 28	POLYMER TIP CARTRIDGE
7.62 MM x 51	BALL (M80) CARTRIDGE
7.62 MM x 51	ARMOR PIERCING (M61) CARTRIDGE
7.62 MM x 51	TRACER (M62) CARTRIDGE
7.62 MM x 51	BLANK CARTRIDGE
7.62 MM x 51	M118 CARTRIDGE
7.62 MM x 39	STELL CORE CARTRIDGE
7.62 MM x 54R	BALL CARTRIDGE
7.62 MM x 54R	TRACER CARTRIDGE
7.62 MM x 63	BLANK CARTRIDGE
8.59 MM x 70	SOLID CARTRIDGE
8.59 MM x 70	BALL CARTRIDGE
8.59 MM x 70	AP CARTRIDGE
8.59 MM x 70	API CARTRIDGE
12.7 MM x 99(.50 Cal)	BALL (M33) CARTRIDGE
12.7 MM x 99(.50 Cal)	TRACER (M17) CARTRIDGE
12.7 MM x 99(.50 Cal)	M8 CARTRIDGE
12.7 MM x 99	ANTI MATERIAL SNIPER CARTRIDGE (API) (M8)
12.7 MM x 99	SOLID SNIPER CARTRIDGE
12.7 MM x 99(.50 Cal)	BLANK CARTRIDGE
12.7 MM x 99	ARMOR PIERCING CARTRIDGE (M2) (AP)
12.7 MM x 99	M20 API-T CARTRIDGE
20 MM x 102	TP CARTRIDGE
20 MM x 102	TP-T CARTRIDGE
20 MM x 102	HEI CARTRIDGE
20 MM x 102	HEI-T CARTRIDGE
20 MM x 102	API CARTRIDGE
20 MM x 102	PHALANX M149 (GF1) APDS CARTRIDGE
20 MM x 110	TP (MOD 1101) CARTRIDGE
20 MM x 110	TP-T (MOD 1107) CARTRIDGE
20 MM x 110	HEI (MOD 1102) CARTRIDGE
20 MM x 110	HEI-T (MOD 1109) CARTRIDGE



7.65 MM x 17
BALL PISTOL CARTRIDGE



9 MM x 17
SHORT PISTOL CARTRIDGE

Cartridge Length, mm	25
Cartridge Weight, g	8,33
Velocity, m/s (10 m)	270
Accuracy, cm	Max 9 (at 25 m)
Bullet Weight, g	4,55
Bullet Type	Brass and Lead Antimony Alloyed
Case Material	CuZn30

Cartridge Length, mm	24,5
Cartridge Weight, g	9,5
Velocity, m/s (10 m)	270 (at 10 m)
Accuracy, cm	Max 9 (at 20 m)
Bullet Weight, g	6
Bullet Type	Brass and Lead Antimony Alloyed
Case Material	CuZn30



9 MM x 19
PARABELLUM PISTOL CARTRIDGE



9 MM x 19
115 GR PISTOL CARTRIDGE

Cartridge Length, mm	29,69
Cartridge Weight, g	12,15
Velocity, m/s (10 m)	370 (at 16 m)
Accuracy, cm	Mean Radius Max. 7,6 cm (at 46 m)
Bullet Weight, g	8 ± 0,075
Bullet Type	FMJ, Brass (CuZn30), Lead Core (Lead Antimony Alloyed)
Case Material	CuZn30

Cartridge Length, mm	29,69
Cartridge Weight, g	12,15
Velocity, m/s (10 m)	370 (at 16 m)
Accuracy, cm	Mean Radius Max. 7,6
Bullet Weight, g	7,45
Bullet Type	FMJ, Brass (CuZn30), Lead Core (Lead Antimony Alloyed)
Case Material	CuZn30



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9 MM x 19 **MARKER TRAINING CARTRIDGE**

Cartridge Length, mm	27,92
Cartridge Weight, g	-
Velocity, m/s (10 m)	-
Accuracy, cm	Mean Radius Max. 9 cm (at 7,5 m)
Bullet Weight, g	0,5
Bullet Type	Plastic
Case Material	CuZn30



9 MM x 20 **LONG PISTOL CARTRIDGE**

Cartridge Length, mm	27,5
Cartridge Weight, g	11,35
Velocity, m/s (10 m)	340
Accuracy, cm	Max 9 (at 30 m)
Bullet Weight, g	7,14
Bullet Type	Brass and Lead Antimony Alloyed
Case Material	CuZn30



9 MM x 17 **BLANK PISTOL CARTRIDGE**

Cartridge Length, mm	29,3
Cartridge Weight, g	4,7
Case Material	CuZn30



9.65 MM (.38 Cal) **SPECIAL (BULLET OUTSIDE)** **PISTOL CARTRIDGE**

	BALL	Special (BULLET OUTSIDE)
Cartridge Length, mm	30,6	38,86
Cartridge Weight, g	15,7	15, 8
Velocity, m/s	180 (10 m)	260
Pressure	Max 1500 kg / cm ²	Max 950 kg / cm ²
Accuracy	Max 9 cm (at 30 m)	Max 4 cm (at 25 m)
Bullet Weight, g	11,5	10,2
Bullet Type	Brass and Lead Antimony Alloyed	Brass and Lead Antimony Alloyed
Case Material	CuZn30	CuZn30



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.45 CAL

AUTO PISTOL CARTRIDGE

Cartridge Length, mm	25
Cartridge Weight, g	8,33
Velocity, m/s (10 m)	270
Accuracy, cm	Max 9 (at 25 m)
Bullet Weight, g	4,55
Bullet Type	Brass and Lead Antimony Alloyed
Case Material	CuZn30



.40 CAL

AUTO PISTOL CARTRIDGE

Cartridge Length, mm	28,8
Cartridge Weight, g	16,7
Velocity, m/s	295
Bullet Weight, g	11,6
Bullet Type	Brass and Lead Core
Case Material	CuZn30
Case Material	CuZn30



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5.56 MM x 45 **BALL (SS109) CARTRIDGE**

Cartridge Length, mm	57,4
Cartridge Weight, g	~ 12,2
Velocity, m/s (23,7 m)	914,4 ± 12,2
Accuracy (100 m)	Sx and Sy Max 2,2 cm
Bullet Weight, g	4
Case Material	Brass (CuZn 28 or CuZn30)
Bullet Material	Gilding Metal, Steel Core and Lead Core (Lead-Antimony Alloyed)
Penetration (RHA)	At least 90% of the bullets completely penetrate through 3.5 mm steel plate (SAE 1010 or 1020) at a range of 570 meters.



5.56 MM x 45 **TRACER (L110) CARTRIDGE**

Cartridge Length, mm	57.4
Cartridge Weight, g	~ 12,5
Velocity, m/s (23,7 m)	880 ± 12
Accuracy	550 m de Sx and Sy Max 300 mm
Bullet Weight, g	4,134
Case Material	Brass (CuZn 28 or CuZn30)
Bullet Material	Copper Plated Steel Jacket, Lead Core (Lead-Antimony Alloyed), Tracer Composition



5.56 MM x45 **BLANK CARTRIDGE**

Cartridge Length, mm	56
Cartridge Weight, g	~ 7
Case Material	Brass (CuZn 28 or CuZn30)

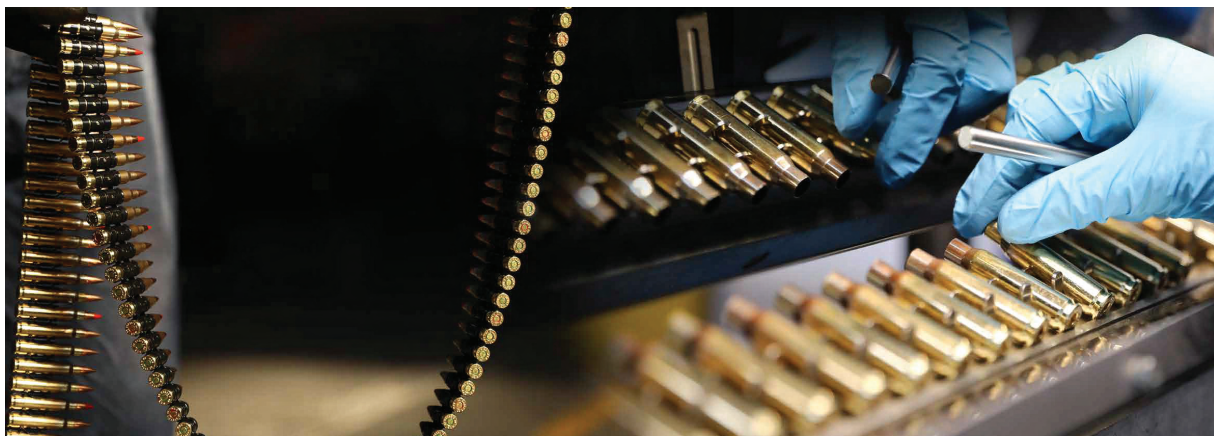


5.56 MM x 45 **POLYMER TIP CARTRIDGE**

Cartridge Length, mm	57,4
Cartridge Weight, g	~ 11,49
Velocity, m/s (23,7 m)	1005 ± 15
Accuracy (100 m)	Sx and Sy Max 3 cm
Bullet Weight, g	3,2
Case Material	Brass (CuZn 28 or CuZn30)
Bullet Material	Polymer Type and Lead Core (Lead-Antimony Alloyed)



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5.56 MM x 45 **BALL (M193) CARTRIDGE**

Cartridge Length, mm	57,4
Cartridge Weight, g	11,5
Velocity, m/s (23,7 m)	964
Accuracy (100 m)	Mean Radius Max. 2,7 cm
Bullet Weight, g	3,55
Bullet Material	Gilding Metal and Lead Core
Case Material	Brass (CuZn 28 or CuZn30)



5.56 MM x 45 **MARKER TRAINING CARTRIDGE**

Cartridge Length, mm	54,1
Cartridge Weight, g	-
Velocity, m/s (23,7 m)	-
Accuracy (7,5 m)	Mean Radius Max. 20 cm
Bullet Weight, g	0,23
Bullet Material	Plastic
Effective Range	Max. 140 m



5.7 MM x 28 **POLYMER TIP CARTRIDGE**

Cartridge Length, mm	40,25
Cartridge Weight, g	6,81
Velocity, m/s (23,7 m)	570
Accuracy (100 m)	-
Bullet Weight, g	3,55
Bullet Material	CuZn10 Lead Core and Polymer Tip
Case Material	Brass (CuZn 28 or CuZn30)



7.62 MM x 51 BALL (M80) CARTRIDGE

Cartridge Length, mm	71,12
Cartridge Weight, g	~ 24
Velocity, m/s (23,7 m)	838 ± 9,1
Accuracy (100 m)	Mean Radius Max. 3,5 cm
Bullet Weight, g	9,65 – 0,20
Bullet Material	Gilding Metal, Lead Core (Lead-Antimony Alloyed)
Case Material	Brass (CuZn 28 or CuZn30)



7.62 MM x 51 ARMOR PIERCING (M61) CARTRIDGE

Cartridge Length, mm	71,12
Cartridge Weight, g	24
Velocity, m/s (23,7 m)	838 ± 9,1
Accuracy (100 m)	Mean Radius Max. 3,1 cm
Bullet Weight, g	9,45 ± 0,15
Bullet Material	Copper Plated Steel Jacket, Steel Core and Lead Core (Lead -Antimony Alloyed)
Case Material	Brass (CuZn 28 or CuZn30)
Penetration (RHA)	At Least 80 % of The Bullets Completely Penetrate 10 mm Thickness Mild Steel Plate (SAE 1010 or 1020) at a Range of 91 meters)



7.62 MM x 51 BLANK CARTRIDGE

Cartridge Length, mm	63,15 mm
Cartridge Weight, g	~ 13 g
Case Material	CuZn30



7.62 MM x 51 TRACER (M62) CARTRIDGE

Cartridge Length, mm	71,12 mm
Cartridge Weight, g	23,6 g
Velocity, m/s (23,7 m)	838 ± 9,1 m/s
Accuracy (100 m)	Mean Radius Max. 4 cm
Tracer	At least 80% of the bullets meet trace quality and trace distance acceptance requirements. (13 m, 140 m, 775 m)
Bullet Weight, g	9,2 ± 0,3 g
Bullet Material	Copper Plated Steel Jacket, Lead Core (Lead - Antimony Alloyed), Tracer Composition



7.62 MM x 51 M118 CARTRIDGE

Cartridge Length, mm	71,12
Cartridge Weight, g	26
Velocity, m/s (23,7 m)	784
Accuracy (100 m)	Mean Radius (183 m) max. 2,7 cm
Bullet Weight, g	11,46
Bullet Material	Gilding Metal, Lead Core
Case Material	(Lead-Antimony Alloyed) CuZn30



7.62 MM x 39 STEEL CORE CARTRIDGE

Cartridge Length, mm	55,60
Cartridge Weight, g	17,89
Velocity, m/s (23,7 m)	710 ±15
Accuracy (100 m)	Mean Radius Max. 3 cm
Case Material	CuZn30
Bullet Material	Gilding Metal, Steel Core
Bullet Weight, g	7,95



7.62 MM x 54R BALL CARTRIDGE

Cartridge Length, mm	77,16 mm
Cartridge Weight, g	21,8 g
Velocity, m/s (23,7 m)	808 m/s
Accuracy (100 m)	Mean Radius Max. 3,5 cm
Case Material	CuZn30
Bullet Weight, g	9,6 g
Bullet Material	Gilding Metal and lead core



7.62 MM x 54R TRACER CARTRIDGE

Cartridge Length, mm	77,16 mm
Cartridge Weight, g	21,8 g
Velocity, m/s (23,7 m)	808 m/s
Accuracy (100 m)	Mean Radius Max. 6 cm
Bullet Weight, g	9,1 g
Bullet Material	Gilding Metal, Steel and Lead Core (Lead Antimony Alloyed)
Case Material	CuZn30

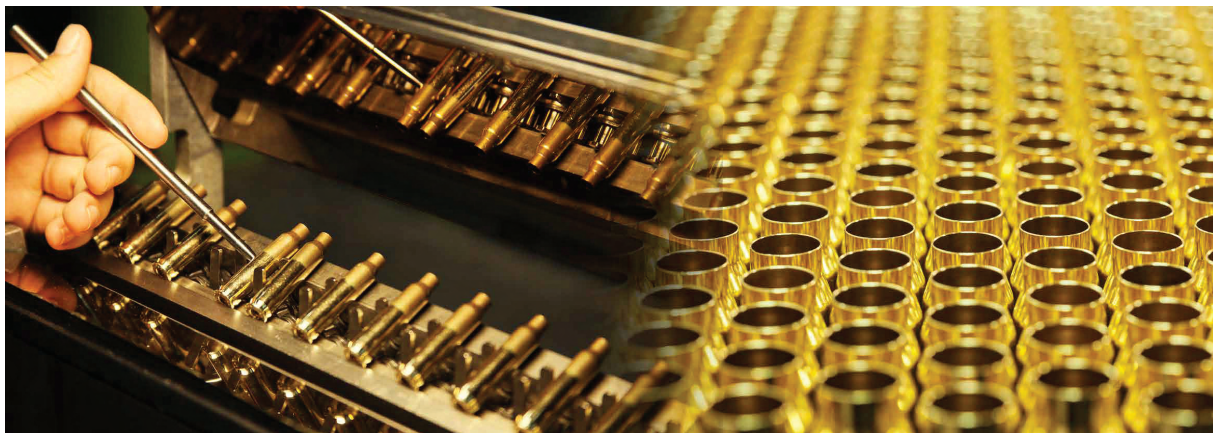


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**7.62 MM x 63
BLANK CARTRIDGE**

Cartridge Length, mm	62,7
Cartridge Weight, g	24
Case Material	CuZn30



8.59 MM x 70 SOLID CARTRIDGE

Cartridge Length, mm	92,25
Cartridge Weight, g	45
Velocity, m/s	890
Accuracy (100 m)	Mean Radius Max. 1,5 cm
Bullet Weight, g	15,6
Bullet Material	Brass
Case Material	CuZn30



8.59 MM x 70 BALL CARTRIDGE

Cartridge Length, mm	91,86
Cartridge Weight, g	-
Velocity, m/s (... m)	890
Accuracy (232,4 m)	Mean Radius Max. 3,675 cm
Bullet Weight, g	16,4
Bullet Material	Gilding Metal, Lead Core (Lead-Antimony Alloyed)
Case Material	CuZn30



8.59 MM x 70 AP CARTRIDGE

Cartridge Length, mm	91,86
Cartridge Weight, g	46
Velocity, m/s (23,7 m)	890
Bullet Weight, g	16,1
Bullet Material	Brass and Steel Core
Penetration (RHA)	At least 12 mm HB 400 steel plate at 550 m
Case Material	CuZn30



8.59 MM x 70 API CARTRIDGE

Cartridge Length, mm	91,86 mm
Cartridge Weight, g	46
Velocity, m/s (23,7 m)	895
Bullet Weight, g	16,1
Bullet Material	Gilding Metal, Tungsten carbide core, Zirconium tip
Penetration (RHA)	At least 16±0.1 mm SAE 1010 (Rockwell B55-B70 hardness) steel plate at 91±1 m
Case Material	CuZn30



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12.7 MM x 99 (.50 Cal.) BALL (M33) CARTRIDGE

Cartridge Length, mm	138,43
Cartridge Weight, g	114
Velocity, m/s	872 (at 23,7 m)
Accuracy, cm	Mean Radius Max. 21,54 (232,4 m)
Bullet Weight, g	41,7
Bullet Material	Gilding Metal, Lead, Tracer Composition
Case Material	CuZn30



12.7 MM x 99 (.50 Cal.) TRACER (M17) CARTRIDGE

Cartridge Length, mm	138,43
Cartridge Weight, g	114
Velocity, m/s (.... m)	872 (at 23,7 m)
Accuracy (232,4 m)	Mean Radius Max. 21,54 (232,4 m)
Bullet Weight, g	41,7
Bullet Material	Gilding Metal, Lead, Tracer Composition
Case Material	CuZn30



12.7 MM x 99 (.50 Cal.) M8 CARTRIDGE

Cartridge Length, mm	138,43
Cartridge Weight, g	114
Velocity, m/s (23,7 m)	887
Accuracy, cm	Mean Radius Max. 12,93 (232,4 m)
Bullet Weight, g	43,60
Bullet Material	Gilding Metal, Steel Core, Chemicals
Case Material	CuZn30
Penetration (RHA)	At least 80 % of the bullets completely perforate DIN 40CrMoV4-6 steel plate 22.2 mm in thickness with Rockwell C30-C45 hardness at 91 m distance from barrel.



12.7 MM x 99 ANTI MATERIAL SNIPER CARTRIDGE (API) (M8)

Cartridge Length, mm	138,43
Cartridge Weight, g	114
Velocity, m/s (23,7 m)	887
Accuracy (232,4 m)	Mean Radius Max. 1 MoA
Bullet Weight, g	43,6
Bullet Material	Gilding Metal, Steel Core, Incendiary Composition
Case Material	CuZn30



12.7 MM x 99 **SOLID SNIPER CARTRIDGE**

Cartridge Length, mm	138,43
Cartridge Weight, g	122
Velocity, m/s (23,7 m)	845
Accuracy (232,4 m)	Mean Radius Max. 1 MoA
Bullet Weight, g	51,76
Bullet Material	Brass
Case Material	CuZn30



12.7 MM x 99 (.50 Cal.) **BLANK CARTRIDGE**

Cartridge Length, mm	99,7
Cartridge Weight, g	55,1
Case Material	CuZn30



12.7 MM x 99 **ARMOR PIERCING CARTRIDGE** **(M2) (AP)**

Cartridge Length, mm	138,43
Cartridge Weight, g	114
Velocity, m/s (23,7 m)	887
Accuracy (100 m)	Sx and Sy Max. 5,45 cm
Bullet Weight, g	42,87
Bullet Material	Gilding Metal, Steel Core
Case Material	CuZn30

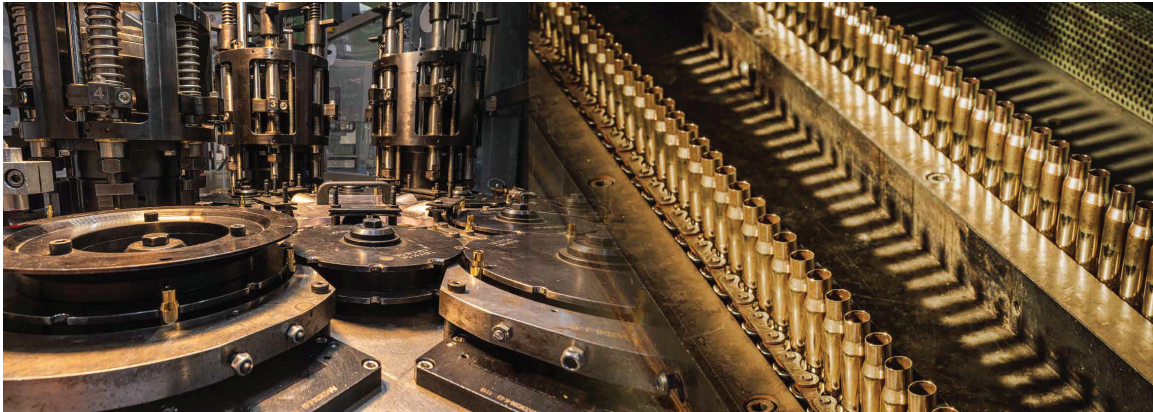


12.7 MM x 99 **M20 API-T CARTRIDGE**

Cartridge Length, mm	138,43
Cartridge Weight, g	122
Velocity, m/s (23,7 m)	1036
Accuracy (232,4 m)	Mean Radius Max. 12,93 cm
Bullet Weight, g	43,6
Bullet Material	Steel Core, Incendiary composition, Tracer Composition



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20 MM x 102 TP CARTRIDGE

Cartridge Length, mm	168,02
Cartridge Weight, g	255
Velocity, m/s (23,7 m)	1030 $\pm$ 15
Accuracy (232,4 m)	Max 16,15 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1025)
Bullet Fuze Type	Aluminum Fuze
Primer	M52 A3 B1 Electrical Primer
Bullet Weight, g	100



20 MM x 102 TP-T CARTRIDGE

Cartridge Length, mm	168,02
Cartridge Weight, g	254
Velocity, m/s (23,7 m)	1030 $\pm$ 15
Accuracy (232,4 m)	Max 26,92 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1025)
Bullet Fuze Type	Aluminum Fuze
Primer	M52 A3 B1 Electrical Primer
Bullet Weight, g	95



20 MM x 102 HEI CARTRIDGE

Cartridge Length, mm	Max 168,02
Cartridge Weight, g	258
Velocity, m/s (23,7 m)	1030 $\pm$ 15
Accuracy (232,4 m)	Max 16,15 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç 1040)
Fuze	M505 A3
Primer	M52 A3 B1 Electrical Primer
Link Type	M12 or M14 Link
Bullet Weight, g	101



20 MM x 102 HEI-T CARTRIDGE

Cartridge Length, mm	Max 168,02
Cartridge Weight, g	263
Velocity, m/s (23,7 m)	1030 $\pm$ 15
Accuracy (232,4 m)	Max 26,92 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç 1040)
Fuze	M505 A3
Primer	M52 A3 B1 Electrical Primer
Link Type	M12 or M14 Link
Bullet Weight, g	103



20 MM x 102 API CARTRIDGE

Cartridge Length, mm	167,43
Cartridge Weight, g	258
Velocity, m/s (23,7 m)	1030
Accuracy (232,4 m)	Max 16,15 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel, Aluminum, Incendiary Composition
Fuze	Aluminum
Primer	M52 A3 B1 Electrical Primer
Link Type	M12 or M14 Link
Bullet Weight, g	88 g



20 MM x 102 PHALANX M149 (GF1) APDS CARTRIDGE

Cartridge Length, mm	168 mm
Cartridge Weight, g	253
Velocity, m/s (23,7 m)	1036 m/s
Accuracy (100 m)	Mean Radius Max. 10,3 cm
Case Model Number	M103
Case Material	Brass (CuZn30)
Bullet Shell Material	Polyamide, Steel, Aluminum
Primer	M52 A3 B1 Electrical Primer
Bullet Weight, g	93 g



20 MM x 110 TP (MOD 1101) CARTRIDGE

Cartridge Length, mm	Max 178
Cartridge Weight, g	215
Velocity, m/s (23,7 m)	945
Accuracy (232,4 m)	max 16,15 cm
Case Model Number	MKE MOD 1001 CASE
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1025)
Bullet Fuze Type	Aluminum Fuze
Primer	12.7 mm (.50 Cal) Primer
Bullet Weight, g	97

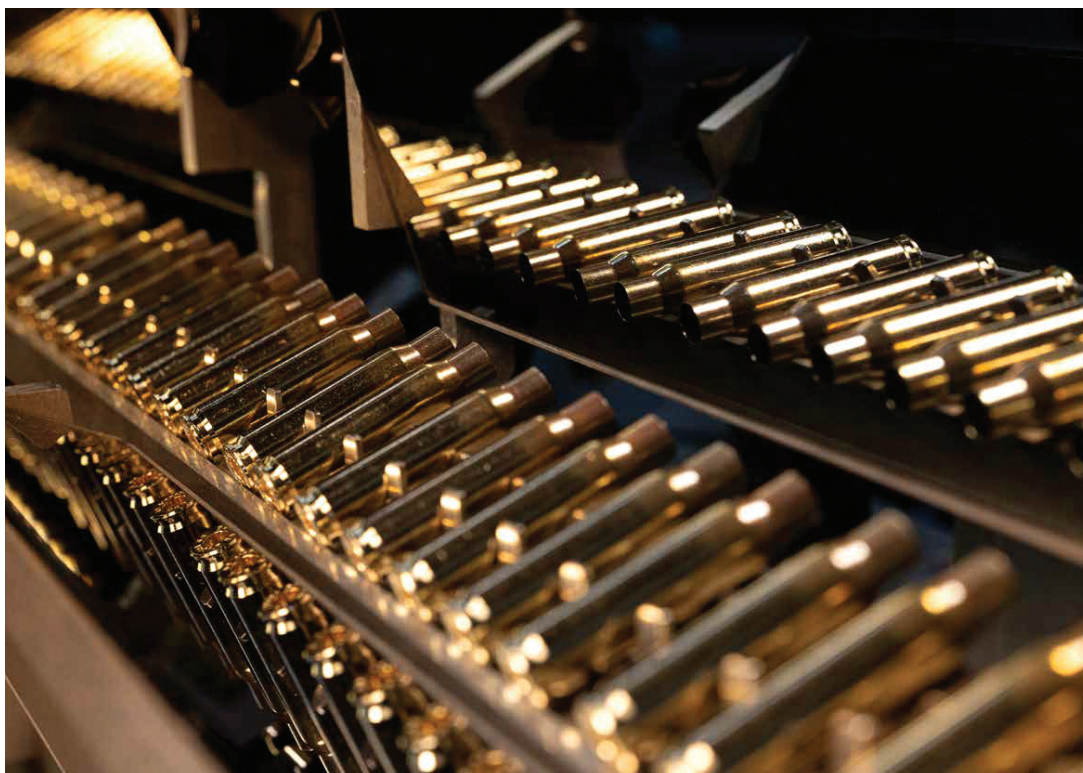


20 MM x 110 TP-T (MOD 1107) CARTRIDGE

Cartridge Length, mm	Max 178
Cartridge Weight, g	220
Velocity, m/s (23,7 m)	945
Accuracy (232,4 m)	Max 26,92 cm
Case Model Number	MKE MOD 1001 CASE
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1025)
Bullet Fuze Type	Aluminum Fuze
Primer	12.7 mm (.50 Cal) Primer, Boxer
Bullet Weight, g	97



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20 MM x 110
HEI (MOD 1102) CARTRIDGE



20 MM x 110
HEI-T (MOD 1109) CARTRIDGE

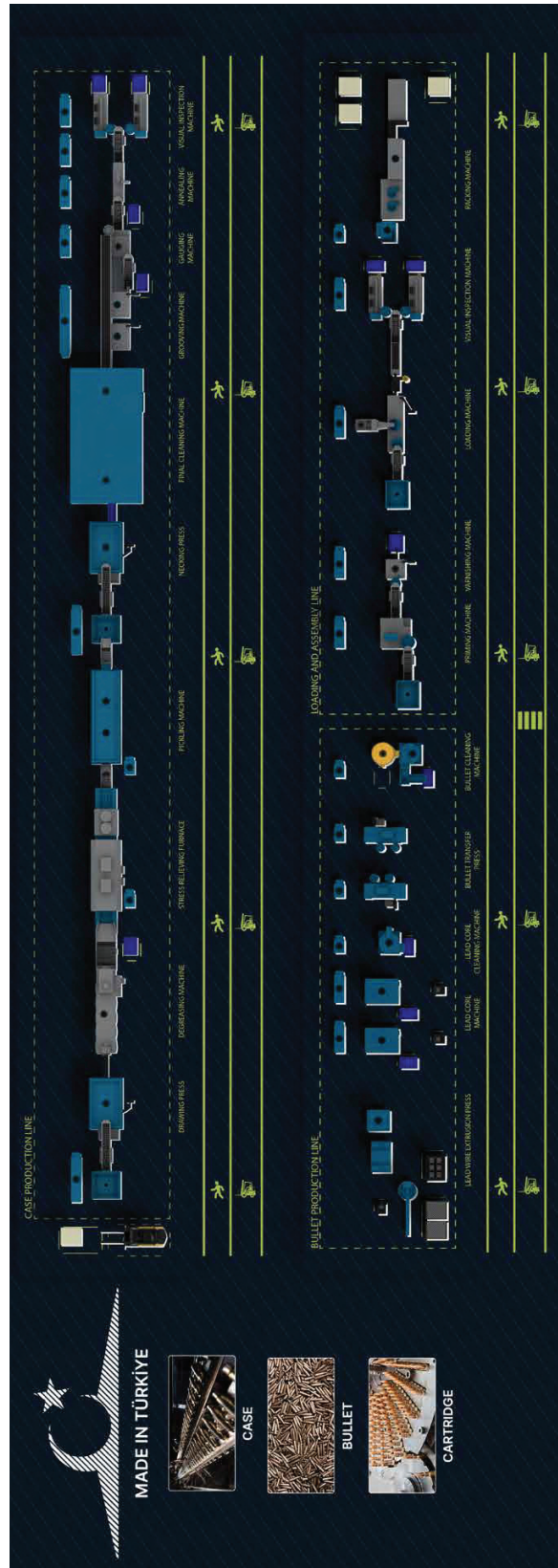
Cartridge Length, mm	Max 178
Cartridge Weight, g	220
Velocity, m/s (24 m)	945
Accuracy (232,4 m)	Max 16,15 cm
Case Model Number	MKE MOD 1001 CASE
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1040)
Bullet Fuze Type	M505 A3 Fuze
Primer	12.7 mm (.50 Cal) Primer
Bullet Weight, g	97

Cartridge Length, mm	Max 178
Cartridge Weight, g	223
Velocity, m/s (24 m)	945
Accuracy (232,4 m)	Max 26,92 cm
Case Model Number	MKE MOD 1001 CASE
Case Material	Brass (CuZn30)
Bullet Shell Material	Steel (Ç1040)
Bullet Fuze Type	M505 A3 Fuze
Primer	12.7 mm (.50 Cal) Primer, Boxer
Bullet Weight, g	103



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Small Arms Ammunition Assembly Line





Ammunition

25 MM

35 MM

40 MM x 46

40 MM x 53

60 MM

81 MM

120 MM (MORTAR AMMUNITION)

105 MM

120 MM (TANK AMMUNITION)

155 MM & 8" (GUN & HOWITZER AMMUNITION)

155 MM (EXTENDED RANGE HOWITZER AMMUNITION)

MECHANICAL FUZES

ELECTRONIC FUZES

MK 81 GP

MK 82 GP

MK 83 GP

MK 84 GP

MK 82-T

MK 82

NEB/NEB-T

4.5 LB. & 25 LB.

UAV AMMUNITION

SHAPED DEMOLITION CHARGE

IGNITION CHARGES AND PRIMERS

BLOCK DEMOLITION CHARGES

SALUTING CHARGES

HAND GRENADES

2.75 INCH ROCKET WARHEADS

SELF-DEFENSE MUNITION (MKE MOD 38)

MKE MOD 51 (M82) PRIMER

MKE MOD 51 (M82) PRIMER

PROPELLING CHARGES FOR HOWITZER AMMUNITION

25 MM Ammunition

M793 TP-T



M792 HEI-T



M791 APDS-T



M793 TP-T

M792 HEI-T

M791 APDS-T

	M793 TP-T	M792 HEI-T	M791 APDS-T
Length	Max. 219.2 mm	Max. 219.2 mm	Max. 223 mm
Weight	~500 g	~500 g	~500 g
Projectile	Steel	Steel	Pusher (Al), Penetrating assbly. (Tungsten), Sabot (Plastic)
Filler	-	AXM-001	-
Detonator	M115 Percussion	M115 Percussion	M115 Percussion
Propellant Type	Double base	Double base	Single base
Propellant Weight	~0.089 kg (It is readjusted again for each propellant lot by shooting)	~0.089 kg (It is readjusted again for each propellant lot by shooting)	~0.096 kg (It is readjusted again for each propellant lot by shooting)
Net Explosive	0.095 kg/shot	0.127 kg/shot	0.102 kg/shot
Fuze	-	M758 self-destruct (If it doesn't crush any target, it will burst after 6.2 s)	-
Cartridge Case	10B30 steel	10B30 steel	10B30 steel
Range	~6000 m (at 650 milyem elevation)	If it doesn't crush any target, it will burst between 3800 - 4500 m	~17500 m (at 746 milyem elevation)
Muzzle Velocity	1100±25 m/s	1100±25 m/s	1345±20 m/s
Packing	55 rounds / hermetic box		
Weapon to be Used	M242, KBA, M811, GAV-12		

35 MM ANTI-AIRCRAFT AMMUNITION



**MSD 020
HE-I**

**ULD 034
TP-T**

**WK MAD 356
Practice**

Complete Round Weight	1570 g	1570 g	1490 g
Complete Round Length	387 mm	387 mm	387 mm
Cartridge Case	672 g	672 g	228 g
Projectile Weight	550 g	550 g	372 g
Fuze	KZD 242	Dummy fuze	Dummy fuze
Self-destruction	11+2 seconds	-	-
Filler	Hexal	-	-
Filler Weight	112 g	-	-
Primer	WK ZSD 263	WK ZSD 263	-
Propellant	NC.01.T.35. OE.M.SMS	NC.01.T.35. OE.M.SMS	-
Propellant Weight	335 g	335 g	-
Muzzle Velocity	1175 m/s	1175 m/s	-
Maximum Range	11000 m	11000 m	-
Effective Range	6000 m	6000 m	-
Weapon to be Used	KDP (353 MK) gun	KDP (353 MK) gun	KDP (353 MK) gun
Packing	1 round / fiber container 25 fiber containers / wooden box		

40 MM x 46 LOW VELOCITY GRENADE LAUNCHER CARTRIDGES

MKE MOD 60 HE



TP-T TARGET
PRACTICE W/TRACER



TP



	MKE MOD 60 HE	TP-T Target Practice W/Tracer	TP
Complete Round Length	~ 100 mm	~ 101 mm	~ 101 mm
Complete Round Weight	~ 210 g	~ 222 g	~ 215 g
Projectile Body	Steel	Aluminum	Aluminum
Tracer	-	Visible for min. 1.5 s at flight	-
Cartridge Case	Aluminum	Aluminum	Aluminum
Cartridge Case Length	46.15 mm	-	-
Fuze	M551, FM551, K502	-	-
Set Up Distance	14-27 m	-	-
Safety Distance From Muzzle	13.4±0.3 m	-	-
Filler	TNT or Comp B	-	-
Filler Weight	~ 35 g	-	-
Muzzle Velocity	76±3 m/s	75±5 m/s	75±5 m/s
Propellant	M9	-	-
Primer	M42	9 mm pistol cartridge primer, Boxer	9 mm pistol cartridge primer, Boxer
Maximum Range	~ 400 m	~ 400 m	~ 400 m
Impact Radius	Kills @5m, hurts @10m	-	-
Packing	72 cartridges and 12 bandoliers / wooden box	72 cartridges / hermetic box	72 cartridges / hermetic box
Weapon to be Used	M79 Grenade Launcher, M203 Launchers or T40		
Smoke Release	-	-	-

40 MM x 46 LOW VELOCITY GRENADE LAUNCHER CARTRIDGES

**MKE MOD 63 GE
TEAR GAS**



MKE MOD 81 LV HE



**MKE MOD 63 GE
Tear Gas**

MKE MOD 81 LV HE

Complete Round Length	~ 106 mm	~ 99.70 MM
Complete Round Weight	~ 230 g	~ 240 gr
Projectile Body	Aluminum	Steel
Tracer	-	-
Cartridge Case	Aluminum	Aluminum
Cartridge Case Length	46.15 mm	46,15 mm
Fuze	-	MKE MOD 80
Set Up Distance	-	>14 m
Safety Distance From Muzzle	-	14 m – 24 m
Filler	CS (Lachrymatory agent)	Comp A5
Filler Weight	~ 55 g	40 g
Muzzle Velocity	75±5 m/s	~ 75 m/s
Propellant	M9	M9
Primer	-	M42
Maximum Range	~ 400 m	~ 400 m
Impact Radius	-	Min. 5 m
Packing	72 cartridges / hermetic box	
Weapon to be Used	M79 Grenade Launcher, M203 Launchers or T40	
Smoke Release	min 15 s	-

40 MM x 53 HIGH VELOCITY AUTOMATIC GRENADE LAUNCHER CARTRIDGES



**MKE MOD 77
TP**

**MKE MOD 78
HE**

**MKE MOD 100
PPHE**

Complete Round Weight	~380 g	~380 g	~388 g
Complete Round Length	max 112 mm	max 112 mm	max 112 mm
Muzzle Velocity	~250 m/s	~250 m/s	~245 m/s
Maximum Range	~2000 m	~2000 m	~2000 m
Accuracy	max 1x1 mils	max 1x1 mils	max 1x1 mils
Filler	-	Comp A5	Comp A5
Body Type	Aluminum (blue anodized coating)	Pre-shaped pre-fragmented + fragmented disc	Pre-shaped pre-fragmented + fragmented disc
Fragment Amount	-	min 500	min 500
Linkage	M16A2, MKE MOD 94 or equivalent	M16A2, MKE MOD94 or equivalent	M16A2, MKE MOD94 or equivalent
Propellant	M2	M2	M2
Purpose of Use	Target practice	Anti-personnel and soft targets	Air-burst Anti-personnel
Impact Radius	-	5 m	5 m
Fuze	-	MKE MOD 79 PD Fuze	ASELSAN Programmable Electronic Fuze
Safety Distance From Muzzle	-	18 m	18 m
Weapon to be Used	MK-19 or equivalent Automatic Grenade Launcher		MK-19 or equivalent AGL with Air Bursting Weapon Upgrade Kit
Packing	48 cartridges / hermetic box		



60 MM Cortel MORTAR AMMUNITION



	M49 A2 HE	MKE MOD 257 TP	MKE MOD 260 Pre-Fragmented	MKE MOD 256 Training
Complete Round Weight	~1421 g	~1421 g	~1355 g	~1365 g
Complete Round Length	~243 mm	~ 243 mm	~ 244 mm	~ 243 mm
Fuze	MKE MOD 502 or AZDM 111 A2	MKE MOD 502 or AZDM 111 A2	MKE MOD 502 or AZDM 111 A2	MKE MOD 502 or AZDM 111 A2 (dummy)
Filler	TNT	Sorel Cement	Comp B.	Sand+wood chips
Filler Weight	~170 g	~ 170 g	~ 145 g	-
Ignition Cartridge	M5A1	M5A1	M5A1	M5A1 (inert)
Primer	M32	M32	M32	M32 (inert)
Muzzle Velocity	~158 m/s	~158 m/s	~158 m/s	-
Maximum Range	~1814 m	~1814 m	~1712 m	-
Impact Diameter	~13 m	-	~20 m	-
Propellant	M3A1, max 4 propellant increments	M3A1, max 4 propellant increments	M3A1, max 4 propellant increments	-
Packing	One round / fiber container, 10 containers / wooden box			
Weapon to be Used	60 mm Commando Mortar			-

81 MM MORTAR AMMUNITION



MKE MOD 214 HE-Long Range

MKE MOD 238 Target Practice Long Range

Complete Round Weight	~4820 g	~4820 g
Complete Round Length	~500 mm	~500 mm
Fuze	AZDM 111 A2 or MKE MOD 502	AZDM 111 A2 or MKE MOD 502
Filler	TNT	Sorel Cement
Filler Weight	~800 g	-
Primer	M34	M34
Propellant	M8 Leaf propellant block, max 6 increments	M8 Leaf propellant block, max 6 increments
Fin	MKE MOD 19	MKE MOD 19
Ignition Cartridge	MKE MOD 30	MKE MOD 30
Muzzle Velocity	~330 m/s	~330 m/s
Maximum Range	~5800 m	~5800 m
Impact Diameter	~30 m	-
Packing	One round / fiber containe, 4 fiber containers / wooden box	
Weapon to be Used	TOSAM UT-1 and 81 mm UT-1 Mortar	

81 MM MORTAR AMMUNITION



MKE MOD 239 Training Long Range

M301 A2 Illuminating

Complete Round Weight	~4580 g	~4863 g
Complete Round Length	~500 mm	~571 mm
Fuze	AZDM 111 A2 (Dummy)	DM 93 or M9813 A1
Filler	Sand + wood chips	Illuminating material
Filler Weight	-	-
Primer	M34 (Inert)	M34
Propellant	-	M8 Leaf propellant block, max 4 increments
Fin	MKE MOD 19	MKE MOD 19
Ignition Cartridge	MKE MOD 30 (Inert)	MKE MOD 30
Muzzle Velocity	-	~173 m/s
Maximum Range	-	~2100 m
Impact Diameter	-	-
Packing	One round / fiber containe, 4 fiber containers / wooden box	One round / fiber container 3 containers / wooden box
Weapon to be Used	-	TOSAM UT-1 and 81 mm UT-1 Mortar



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81 MM MORTAR AMMUNITION



M43 A1 B1 HE



**MKE MOD 273
TARGET PRACTICE**



**MKE MOD 216
TRAINING**

**M43 A1 B1
HE**

**MKE MOD 273
Target Practice**

**MKE MOD 216
Training**

Complete Round Weight	~3253 g	~3253 g	~3140 g
Complete Round Length	~338 mm	~338 mm	~338 mm
Fuze	AZDM 111 A2 or MKE MOD 502	AZDM 111 A2 or MKE MOD 502	AZDM 111 A2 (Dummy)
Filler	TNT	Sorel cement	Sand + wood chips
Filler Weight	~548 g	~550 g	-
Primer	M34	M34	M34 (Inert)
Propellant	M1A1, max 6 increments	M1A1, max 6 increments	-
Propellant Weight	45 g	45 g	-
Fin	M3	M3	M3
Ignition Cartridge	MKE MOD 29	MKE MOD 29	MKE MOD 29 (Inert)
Muzzle Velocity	~213 m/s	~213 m/s	-
Maximum Range	~3000 m	~3000 m	-
Impact Diameter	~20 m	-	-
Packing	One round / fiber container, 4 fiber containers / wooden box		
Weapon to be Used	M1 and M29 Mortars	M1 and M29 Mortars	-

120 MM MORTAR AMMUNITION



MKE MOD 209 RIFLED HE	MKE MOD 228 RIFLED TP	MKE MOD 250 RIFLED SMOKE HC	MKE MOD 236 A1 RIFLED ILLUM.	MKE MOD 227 RIFLED PRACTICE	MKE MOD 308 SMOOTHBORE HE
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Complete Round Weight	~18000 g	~18000 g	~18000 g	~17000 g	~17000 g	~15900 g
Complete Round Length	~827 mm	~827 mm	~827 mm	~824 mm	~827 mm	~817 mm
Fuze	M557 MKE MOD 124 MKE MOD 134 MKE MOD 92	M557 MKE MOD 124 MKE MOD 134 MKE MOD 92	MKE MOD 125 MKE MOD 145	MKE MOD 124 or DM93	M73 (Dummy)	MKE MOD 502 or AZDM 111 A2
Filler	TNT	Sorel Cement	HC	Illuminating material	Sand+wood chips	TNT
Filler Weight	~4.24 kg	-	-	-	-	~2.85 kg
Illumination/Smoke	-	-	Min 60 s	Min 60 s	-	-
Muzzle Velocity	~365 m/s	~365 m/s	~365 m/s	~365 m/s	-	~440 m/s
Maximum Range	~8180 m	~8180 m	~8180 m	~8180 m	-	~10000 m
Impact Diameter	~60 m	-	-	-	-	-
Ignition Cartridge	MKE MOD 37	MKE MOD 37	MKE MOD 37	MKE MOD 37	MKE MOD 37 (inert)	-
Propellant	Leaf Propellant, max 10 propellant inc.					Horseshoe prop.
Packing	1 round / fiber container, 2 fiber containers / wooden box					
Weapon to be Used	TOSAM HY-12 and 120 mm HY1-12 Rifled Mortars				-	120 mm Smooth Bore Mortar

105 MM TANK GUNS & HOWITZER AMMUNITION

**MKE MOD 233 HE
TANK GUN**



**MKE MOD 234 TP
TANK GUN**



M1 HE HOWITZER



	TANK GUN HE MKE MOD 233	TANK GUN TP MKE MOD 234	M1 HE HOWITZER
Complete Round Weight	~24505 g	~24125 g	~19000 g
Complete Round Length	~1028 mm	~1028 mm	~790 mm
Cartridge Case	MKE MOD 26	MKE MOD 26	M14
Projectile Weight	-	-	-
Filler	TNT	Sorel cement	TNT
Filler Weight	~1.99 kg	-	~1.98 kg
Fuze	M557, MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD184	M73 (Dummy fuze)	M557, MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD184
Primer	-	-	-
Propellant	M1	M1	M67 Dualgrain
Propellant Weight	~3 kg	~3 kg	~1,24 kg
Muzzle Velocity	~683 m/s	~683 m/s	~465 m/s
Maximum Range	~11000 m	~11000 m	~11000 m
Packing	1 round / fiber container, 2 fiber containers / wooden box		
Weapon to be Used	Leopard 1/M48T5 tanks with L7A3 cannon, M48A5 tank with M68 cannon	Leopard 1/M48T5 tanks with L7A3 cannon, M48A5 tank with M68 cannon	M101/M101A1 howitzers with M2A1/M2 A2 cannons, M52/M52A1 howitzers with M49 cannon

105 MM TANK GUNS & HOWITZER AMMUNITION

**MKE MOD 288 HE-ER
HOWITZER AMMUNITION**



**105/35 MM MOD 270
SUBCALIBER
AMMUNITION**



**105/35 MM
MOD 270 SUBCALIBER
AMMUNITION**

**MKE MOD 288
HE-ER HOWITZER
AMMUNITION**

Complete Round Weight	~1570 g	~14500 g
Complete Round Length	~387 mm	~ 850 mm
Cartridge Case	-	M14
Projectile Weight	550 g	~10680 g
Filler	-	TNT
Filler Weight	-	~2.2 kg
Fuze	Dummy fuze	M557, MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD184
Primer	MKE MOD 67	-
Propellant	NC.01.T.35. OE.M.SMS	105 mm ER Propellant
Propellant Weight	335 g	2450 g
Muzzle Velocity	1175 m/s	~695 m/s
Maximum Range	11000 m	~17500 m
Packing	1 round / fiber container, 25 fiber containers / wooden box	1 round / fiber container, 2 fiber containers / wooden box
Weapon to be Used	35 mm Barrel placed in 105 mm Tank Gun	M101/M101A1 howitzers with M2A1/ M2 A2 cannons, M52/ M52A1 howitzers with M49 cannon



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120 MM TANK AMMUNITION

MKE MOD 300 HE-T



MKE MOD 301 TP-T



MKE MOD 310
HEAT-MP-T



MKE MOD 300 HE-T

MKE MOD 301 TP-T

MKE MOD 310 HEAT-MP-T

Complete Round Weight	~27500 g	~27500 g	~25000 g
Complete Round Length	~984 mm	~984 mm	~984 mm
Pressure	max 3200 bar	max 3200 bar	max 3200 bar
Cartridge Case	Combustible case	Combustible case	Combustible case
Filler	TNT	Sorel cement	RDX
Filler Weight	4240 g	4200 g	1760 g
Fuze	MKE MOD 305, MKE MOD 307	MKE MOD 305, MKE MOD 307	-
Propellant	CEP-2 Doublebase	CEP-2 Doublebase	CEP-2 Doublebase
Muzzle Velocity	870 m/s	870 m/s	925 m/s
Effective Range	~2000 m	-	~2000 m
Accuracy	max 1x1 artillery mils (@1000 m)	-	max 0.3x0.3 artillery mils (@1000 m)
Penetration	-	-	400 mm (On 225 mm thick plate placed at 200 m with 34° inclination)
Packing	1 round / hermetic box 20 hermetic boxes/pallet		
Weapon to be Used	44 caliber M60T and Leopard 2A4		NATO 120mm smooth-bore cannons, L-44 and L-55 (M60 A1 Tank, L-44 (Leopard 2), L-55 (Leopard 2 A6, Altay)

120 MM TANK AMMUNITION



	MKE MOD 290 APFSDS-T	MKE MOD 291 TPCSDS-T	MKE MOD 292 HIGH PRESSURE
Complete Round Weight	~20000 g	~18300 g	~22000 g for L-44 ~22200 g for L-55
Complete Round Length	~984 mm	~925 mm	~ 933.5 mm
Pressure	-	-	6410-6900 bar for L-44 7030-7430 bar for L-55
Cartridge Case	Combustible case	Combustible case	Combustible case
Filler	-	-	-
Filler Weight	-	-	-
Fuze	-	-	-
Propellant	NC-NG Doublebase	NC-NG Doublebase	NC-NG Doublebase
Muzzle Velocity	1705±15 m/s	1730 m/s	-
Effective Range	~2000 m	~2000 m	-
Accuracy	-	-	-
Penetration	658 mm (on NATO 70° steel shell)	-	-
Packing	1 round / hermetic box 20 hermetic boxes/pallet		
Weapon to be Used	NATO 120mm smooth-bore cannons,L-44 and L-55 (M60 A1 Tank, L-44 (Leopard 2), L-55 (Leopard 2 A6, Altay)		



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155 MM & 8" GUN & HOWITZER AMMUNITION



155 mm GUN M101 HE 155 mm HOWITZER M107 HE 155 mm HOWITZER TP MKE MOD 272 8" HOWITZER M106 HE

Weight w/ Lifting Plug	~43125 g	~42927 g	~42927 g	~91106 g
Length w/ Lifting Plug	~681 mm	~681 mm	~681 mm	~872 mm
Fuzes	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184, M557	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184, M557	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184, M557	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184, M557
Filler	TNT	TNT	Sorel Cement	TNT
Filler Weight	~6.6 kg	~6.6 kg	~6.6 kg	~16.5 kg
Propellant Charge	M19	M4A2, M3A1, M119A2	M4A2, M3A1, M119A2	-
Propellant	M6	M1	M1	M1, M2
Muzzle Velocity	~640 m/s	~564-684 m/s (w/ different howitzers)	~564-684 m/s (w/ different howitzers)	~594 m/s
Maximum Range	23500 m	~14600-18100 m (w/ different howitzers)	~14600-18100 m (w/ different howitzers)	16800 m
Supp. Charge	TNT	TNT	-	TNT
Weapon to be Used	M2 howitzer w/M2 cannon	M109A1, M109A1B1, M109A2, M109A3, M198, PANTER and FIRTINA Howitzer	M109A1, M109A1B1, M109A2, M109A3, M198, PANTER and FIRTINA Howitzer	M2, M2A1 M2A1E1, M47

155 MM EXTENDED RANGE HOWITZER AMMUNITION

MKE MOD 274 HEER



MKE MOD 276 TRAINING



MKE MOD 274 HEER

MKE MOD 276 TRAINING

Weight w/ Lifting Plug	~45350 g	~44290 g
Length w/ Lifting Plug	~950 mm	~950 mm
Fuzes	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184 M582A1, M564, M557, M739, M739A1, AS7250	M73 Dummy
Filler	TNT	Sand and Wood Chips
Filler Weight	~10.5 kg	~10.5 kg
Propellant Charge	Modular Charge (3 to 6 modules)	-
Muzzle Velocity	~945 m/s	-
Maximum Range	~39000 m	-
Base Bleed	Active	Inert
Supp. Charge	TNT	-
Dispersion [at 29250 m (%75 of max. range)]	Firtina : %0.64 Panter : %0.74	-
Weapon to be Used	FIRTINA and PANTER Howitzers or equal 52 cal. weapon systems	-



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155 MM EXTENDED RANGE HOWITZER AMMUNITION

MKE MOD 277 PRACTICE



MKE MOD 281 TP-ER



MKE MOD 277 PRACTICE

MKE MOD 281 TP-ER

Weight w/ Lifting Plug	~45500 g	~45459 g
Length w/ Lifting Plug	~950 mm	~950 mm
Fuzes	M73 Dummy	MKE MOD 90, MKE MOD 92, MKE MOD 134, MKE MOD 135, MKE MOD 184 M582A1, M564, M557, M739, M739A1, AS7250
Filler	Sorel Cement	Sorel Cement
Filler Weight	~10.5 kg	~10 kg
Propellant Charge	Modular Charge (3 to 6 modules)	Modular Charge (3 to 6 modules)
Muzzle Velocity	-	~945 m/s
Maximum Range	~31554 m	~39000 m
Base Bleed	Inert	Active
Supp. Charge	-	TNT
Dispersion [at 29250 m (%75 of max. range)]	-	-
Weapon to be Used	FIRTINA and PANTER Howitzers or equal 52 cal. weapon systems	FIRTINA and PANTER Howitzers or equal 52 cal. weapon systems

MECHANICAL FUZES



**MKE MOD 45
HAND GRENADE FUZE**

Fuze Function	Pyrotechnic delayed detonation
Body Material	Die Casting Zinc Alloy
Weight	~85 g
Length	95 mm
Delay Time	3,90-5,20 s
Primer	M42 Percussion primer
Thread	W18x1"/12 or 0,5625"-12UNC-1A
Ammunition Used	MK2 Defence Hand Grenade



**MKE MOD 47
HAND GRENADE FUZE**

Fuze Function	Pyrotechnic delayed detonation
Body Material	Polycarbonate Plastic
Weight	~85 g
Length	94.6 mm
Delay Time	3,90-5,20 s
Primer	M42 Percussion primer
Thread	W18x1"/12 or 0,5625"-12UNC-1A
Ammunition Used	MK2 MOD 46 Practice Hand Grenade



**MKE MOD 49
HAND GRENADE FUZE**

Fuze Function	Pyrotechnic delayed detonation
Body Material	Die Casting Zinc Alloy
Weight	~85 g
Length	94.6 mm
Delay Time	3,90-5,20 s
Primer	M42 Percussion primer
Thread	W18x1"/12 or 0,5625"-12UNC-1A
Ammunition Used	MKE MOD 48 Offensive Hand Grenade



**DOUBLE SAFETY
GRENADE FUZE**

Fuze Functioning	Pyrotechnic delayed detonation
Delay Time	3,90 – 5,20 Seconds
Capsule	Point-Detonating M42
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Weight	~85 gr
Length	95 mm (MAX)
Threads	W18x1"/12 or 0,5625"-12UNC-1A
Fuze Safety	Double Safety System (Pull Ring / Safety Latch)
Shelf-Life	10 Years
Ammunitions Used with	MK2 Defense Grenade MK2 MKE MOD 44 Defense Grenade MK3 A2 Offensive Grenade MKE MOD 56 OC Grenade MKE MOD 48 Offensive Grenade

MECHANICAL FUZES

MKE MOD 79 - 40 mm HV GRENADE LAUNCHER FUZE

Type	Point-Detonating
Fuze Functioning	Super-Quick (SQ)
Rotor Non-Arming / Arming RPM	1000 / 3000 RPM
Rotor Non-Arming / Arming Acceleration	600 / 2500 G
Muzzle Safety Distance (Minimum)	18 Meters
Functioning Distance	36 Meters
Storage Temperature Range	-54°C / +71°C
Operation Temperature Range	-46°C / +63°C
Weight	~90 gr
Length	44,5 mm (MAX)
Threads	1 15/32"-24NS-2A
Shelf-Life	10 Years
Ammunition Used with	40 mm High-Velocity Grenade Launcher Ammunitions
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 80 - 40 mm LOW-VELOCITY GRENADE LAUNCHER FUZE

Type	Point-Detonating
Fuze Functioning	Super-Quick (SQ)
Rotor Non-Arming / Arming RPM	1000 / 3000 RPM
Rotor Non-Arming / Arming Acceleration	600 / 2500 G
Muzzle Safety Distance (Minimum)	14 Meters
Functioning Distance	28 Meters
Storage Temperature Range	-54°C / +71°C
Operation Temperature Range	-46°C / +63°C
Weight	~90 gr
Threads	M35x1-6H
Shelf-Life	10 Years
Ammunition Used with	40 mm Low-Velocity Grenade Launcher Ammunitions
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



MECHANICAL FUZES

MKE MOD 90 CONCRETE PIERCING ARTILLERY FUZE

Type	Mechanical Point-Detonating (Delay)
Fuze Functioning	Delay (0,1 Seconds)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	23 gr Tetryl
Weight	~900 gr
Length	151,6 mm (MAX)
Threads	2"-12UNS-2A
Shelf-Life	10 Years
Ammunitions Used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and Tank High-Explosive Ammunitions
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 92 MECHANICAL ARTILLERY FUZE

Type	Mechanical Point-Detonating (SQ-DL)
Fuze Functioning	Super-Quick - Delay (0,05 Seconds)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	23 gr Tetryl
Weight	~730 gr
Length	151,6 mm (MAX)
Threads	2"-12UNS-2A
Shelf-Life	10 Years
Ammunitions Used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and High-Explosive Tank Ammunitions
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157





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MECHANICAL FUZES

M557 MECHANICAL ARTILLERY FUZE

Type	Point-Detonating (PD)
Fuze Functioning	Super-Quick (SQ) - Delay (0,05 Seconds)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 2000 RPM
Muzzle Safety Distance (Minimum)	50 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	22 gr RDX
Weight	~975 gr
Length	151,6 mm (MAX)
Threads	2''-12UNS-2A
Shelf-Life	10 Years
Ammunitions Used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and High-Explosive Tank Ammunitions
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 502 MORTAR FUZE



Type	Mechanical Point-Detonating
Fuze Functioning	Super-Quick (SQ) - Delay (0,06 Seconds)
Maximum Acceleration	11.000 G
SAD Non-Arming / Arming Acceleration	400 / 650 G
Upper Body Arming Acceleration	1000 G
Muzzle Safety Distance (Minimum)	≥0,8 Seconds (40 Meters)
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	13 gr Tetryl
Weight	~200 gr
Length	87,5 mm (MAX)
Threads	1,5''-12UNS-1A
Fuze Safety	Triple Safety System
Shelf-Life	10 Years
Weaspons Used with	60 mm, 81 mm and 120 mm Mortar
Ammunitions used with	60 mm, 81 mm and 120 mm Tail-Balanced Mortar Ammunition
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157

MECHANICAL FUZES

AZDM 111 A2 MORTAR FUZE

Type	Mechanical Point-Detonating (PD)
Fuze Functioning	Super-Quick (SQ) - Delay (0,06 Seconds)
Maximum Acceleration	11.000 G
SAD Non-Arming / Arming Acceleration	400 / 650 G
Muzzle Safety Distance (Minimum)	≥0,8 Seconds (40 Meters)
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	13 gr Tetryl
Weight	~200 gr
Length	85 mm (MAX)
Threads	1,5''-12UNF-1A
Fuze Safety	Double Safety System
Shelf-Life	10 Years
Weaspons Used with	60 mm and 81 mm Mortar
Ammunitions used with	60 mm and 81 mm Tail-Balanced Mortar Ammunition
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 305 SMOOTHE-BORE TANK AMMUNITION FUZE

Type	Mechanical Point-Detonating / Fin Stabilized Tank Ammunition Fuze
Fuze Functioning	Super-Quick - Delay (0,06 Seconds)
SAD Non-Arming / Arming Acceleration	400 / 650 G
Muzzle Safety Distance (Minimum)	50 Meters
Exact Function Range	200 Meters
Arming Time	150±50 Milliseconds
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	13 gr Tetryl
Weight	~1340 gr
Length	85 mm (MAX)
Threads	2''-12UNS-1A
Fuze Safety	Double Safety System
Shelf-Life	10 Years
Weaspons Used with	M60, Leopard A2, Altay
Ammunitions used with	120 mm MKE MOD 300 HE Tank Ammunition, 120 mm MKE MOD 301 D/A Ammunition
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157; AOP-4187



MECHANICAL FUZES

MKE MOD 53 ROCKET FUZE

Type	Point-Detonating (SQ-DL)
Fuze Functioning	Super-Quick (SQ) - Delay (0,05 Seconds)
Upper Body Arming RPM	10.000 RPM
Safety Device Non-Arming / Arming RPM	10.000 / 15.000 RPM
Muzzle Safety Distance (Minimum)	10 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	25 gr Tetra
Weight	~637 gr
Length	123,7 mm (MAX)
Threads	1 7/16'' - 12UN-2A
Shelf-Life	10 Years
Ammunitions used with	107 mm Anadolu Rocket (Artillery Rocket)
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



M505 A3 (20 MM AMMUNITION) FUZE

Type	Point-Detonating (PD)
Fuze Functioning	Super-Quick (SQ)
Maximum Acceleration	120.000 G
SAD Non-Arming / Arming RPM	40200 / 49800 RPM
Muzzle Safety Distance (Minimum)	3 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	480±50 mg RDX
Weight	~21,45 gr
Length	31,2 mm (MAX)
Threads	0,5625'' - 35NS-2A
Shelf-Life	10 Years
Ammunitions used with	20 mmx102 M56A3 HEI and HEI-T Ammunition 20 mmx110 HEI and HEI-T Ammunition (MKE MOD 1102-1109)
Applied Standards	MIL-STD-331; AOP-4157



MECHANICAL FUZES

KZD 242 (35 MM AMMUNITION) FUZE

Type	Point-Detonating (SQ-SD)
Fuze Functioning	Super-Quick – Self-Destruction
Self-Destruction RPM	≤ 35.000 RPM
SAD Non-Arming / Arming RPM	35000 / 70000 RPM
Self-Destruction Time	11+2 Seconds
Arming / Muzzle Safety Distance (Minimum)	40 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Weight	~46 gr
Length	80 mm (MAX)
Threads	M22x1.5-6e
Shelf-Life	10 Years
Ammunitions used with	35 mm HE-I MSD 020 Anti-Aircraft Destruction Incendiary Ammunition
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 128 UAV Ammunition Fuze



Type	Drone Fuze
Fuze Functioning	Super-Quick (PD SQ)
Arming Time	~1 second
UAV Safe Separation	Minimum 6 meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	13 gr RDX or Tetryl
Length	74,6 mm (MAX)
Threads	1,5''-12 UNF-1A
Diameter	49 mm
Shelf-Life	10 Years
Fuze Safety	1- Transportation Safety Wire 2- Drone Connecting Ring



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MECHANICAL FUZES

MKE MOD 122 (76/62 mm NAVAL AMMUNITION) FUZE

Type	Point-Detonating / Back-Up
Fuze Functioning	Super-Quick (SQ) – Back-Up (0,05 Seconds)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	46,5 gr Tetryl
Weight	895 gr
Length	203 mm (MAX)
Threads	M58 x 1,5 6H
Shelf-Life	10 Years
Ammunitions used with	76/62 Naval Ammunition
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 150 Rocket Fuze



Type	Point-Detonating (SQ-DL)
Fuze Functioning	Super-Quick (SQ) Short Delay (1-5 ms) Long Delay (7-30 ms)
Zigzag Mechanism Not-Arming / Arming Acceleration	15 / 25 G
Muzzle Safety Distance (Minimum)	150 - 400 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	23,2 gr Tetryl
Weight	~755 gr
Length	195,36 mm (MAX)
Threads	M45x2
Shelf-Life	10 Years
Ammunitions used with	122 mm MBRL Ammunition
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157; STANAG 2916

MECHANICAL FUZES

MKE MOD 155 Rocket Fuze

Type	Mechanical Point-Detonating (SQ)
Fuze Functioning	Super-Quick
Zigzag Mechanism Not-Arming / Arming Acceleration	13 / 40 G
Muzzle Safety Distance (Minimum)	200 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	9 gr Tetryl
Weight	~340 gr
Length	101,6 mm (MAX)
Threads	1 7/16" - 16UN-2A
Shelf-Life	10 Years
Ammunitions used with	MK 40 MOD 3, MK 4 MOD 10, MK 4 MODs, MK 4 MOD 13
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



MKE MOD 137 Rocket Fuze



Type	Point-Detonating (SQ-DL)
Fuze Functioning	Super-Quick (SQ) - Delay (0,05 Seconds)
Safety Device Non-Arming / Arming RPM	1000 / 4000 RPM
Impact Module Non-Arming / Arming RPM	750 / 2100 RPM
Muzzle Safety Distance (Minimum)	50 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	25 gr Tetryl
Weight	~530 gr
Length	122,55 mm (MAX)
Diameter	45 mm
Threads	1 7/16" - 12UN-2A
Shelf-Life	10 Years
Ammunitions used with	107 mm MBRL Rocket (Artillery Rocket)
Applied Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157

MECHANICAL FUZES

MKE MOD 138 Naval Ammunition Fuze

Type	Mechanical Point-Detonating (SQ-SD)
Fuze Functioning	Super-Quick – Self-Destruction
Self-Destruction RPM	≤ 35.000 RPM
SAD Non-Arming / Arming RPM	35.000 / 50.000 RPM
Self-Destruction Time	12±5 Seconds
Arming / Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	5 gr Tetryl
Weight	~45 gr
Length	71 mm (MAX)
Threads	M22x1-6e
Shelf-Life	10 Years
Ammunitions used with	40/70 Naval Ammunitions
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157



ELECTRONIC FUZES

MKE MOD 124 Electronic Time Fuze

Type	Electronic Time, Mechanical Point-Detonating (PD SQ)
Fuze Functioning	Electronic Time, Super-Quick (PD Back-Up)
Electronic Setting Type	Inductive Fuze Setting Device (STANAG 4369 and AOP-22 Compliant)
Electronic Time Setting	2-199,9 Seconds (0,1 Increments)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	5 gr Blackpowder
Weight	~730 gr
Length	151.6 mm (MAX)
Threads	2''-12UNS-2A
Shelf-Life	10 Years
Ammunitions used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and Tank (Illumination/Smoke) Ammunitions
Related Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157



ELECTRONIC FUZES

Type	Electronic Time, Mechanical Point-Detonating (PD SQ)
Fuze Functioning	Electronic Time, Super-Quick (PD Back-Up)
Electronic Setting Type	Inductive Fuze Setting Device (STANAG 4369 and AOP-22 Compliant)
Electronic Time Setting	2-199,9 Seconds (0,1 Increments)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	22 gr RDX / Tetryl
Weight	~ 685 gr
Length	151,6 mm (MAX)
Threads	2"-12UNS-2A
Shelf-Life	10 Years
Ammunitions used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and High-Explosive Tank Ammunitions
Related Standards	STANAG 2916; MIL-STD-1316; MIL-STD-331; AOP-4157

MKE MOD 134 Electronic Time Fuze



MKE MOD 184 Multi-Purpose Artillery Fuze



Type	Multi-Purpose Artillery Fuze
Fuze Functioning	Super-Quick (SQ) - Delay (0,05 Seconds) Time - Proximity
Electronic Setting Type	Inductive Fuze Setting Device (STANAG 4369 and AOP-22 Compliant)
Electronic Time Setting	2-199,9 Seconds (0,1 Increments)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Height Of Burst	6 m and 12 m
Super-Quick	< 100 µs
Delay	0,05 sn
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	22 gr RDX / Tetryl
Weight	~ 700 gr
Length	151,6 mm (MAX)
Threads	2"-12UNS-2A
Shelf-Life	10 Years
Ammunitions used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and Tank High-Explosive Ammunitions
Related Standards	STANAG 4187; MIL-STD-1316; MIL-STD-331; STANAG 4157

ELECTRONIC FUZES

MKE MOD 135 Electronic Proximity Fuze

Type	Electronic Proximity Fuze
Fuze Functioning	Electronic Proximity, Mechanical PDSQ (PD Back-Up)
Electronic Setting Type	Inductive Fuze Setting Device (STANAG 4369 and AOP-22 Compliant)
Electronic Time Setting	2-199,9 Seconds (0,1 Increments)
Maximum RPM	≤ 30.000 RPM
Maximum Acceleration	≤ 30.000 G
SAD Non-Arming / Arming RPM	1000 / 4000 RPM
SAD Non-Arming / Arming Acceleration	25 / 250 G
Muzzle Safety Distance (Minimum)	35 Meters
Height Of Burst	6 m and 12 m
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	22 gr RDX / Tetry
Weight	~700 gr
Length	151,6 mm (MAX)
Threads	2"-12UNS-2A
Shelf-Life	10 Years
Ammunitions used with	105-120-155-203 mm Spin Stabilized Cannon, Howitzer, Mortar and High-Explosive Tank Ammunitions
Related Standards	STANAG 4187; MIL-STD-1316; MIL-STD-331; STANAG 4157



MKE MOD 307 Smoothbore Ammunition Fuze

Type	Electronic Point-Detonating
Fuze Functioning	Electronic Super-Quick Electronic Time (0,5-50 Seconds / 0,01 Increments)
SAD Non-Arming / Arming Acceleration	400 / 650 G
Muzzle Safety Distance (Minimum)	50 Meters
Exact Function Range	400 Meters
Arming Time	150±50 Milliseconds
Storage Temperature Range	-54°C / +71°C
Operating Temperature Range	-46°C / +63°C
Booster	~22 gr Tetryl / RDX
Weight	~1340 gr
Length	151,6 mm (MAX)
Threads	2"-12 UNS-1A
Shelf-Life	10 Years
Ammunitions used with	120 mm MKE MOD 300 HE Tank Ammunition, 120 mm MKE MOD 301 D/A Ammunition
Applied Standards	MIL-STD-1316; MIL-STD-331; AOP-4157; STANAG 2916



ELECTRONIC FUZES



MKE MOD127 INDUCTIVE FUZE SETTING DEVICE

Type	Inductive Fuze Setting Device Compliant to STANAG 4369/AOP-22
Setting Device Function	Electronic Time Setting, Proximity Mode, Impact Mode, Storage Mode
Electronic Time Setting	2-199,9 Seconds (0.1 Increments)
Shelf-Life	10 Years
Battery	3 pieces 1.5V commercial AA size batteries and/ or embedded battery (can be charged with 5V charging adapter)
Weight	~890 gr
Protection Class	IP 65
Operating Temperature Range	-32 °C / +43 °C
Width-Height-Depth	104-202,5-43 mm



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250 LB. MK 81 GP AIRCRAFT BOMB



MK 81 GP

Weight w/o Tail Assembly	115 (± 5) kg (w/nose plug – w/shipping cap)
Length w/o Tail Assembly	1180 $\pm$ 10 mm (w/nose plug – w/shipping cap)
Maximum Diameter	~228 mm
Filler	TNT
Filler Weight	~40 kg
Center of Gravity	650 $\pm$ 10 mm (w/nose plug – w/shipping cap)
Fuze	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes
Packing	6 pcs in a metal pallet

500 LB. MK 82 GP AIRCRAFT BOMB

MK82 MOD1 HE



**MK82 MOD1
PRE-FRAGMENTED**



**MK82 MOD1
PRACTICE**



**MK82 MOD1
HE**

**MK82 MOD1
PRE-FRAGMENTED**

**MK82 MOD1
PRACTICE**

Weight	239 kg	245 kg	234 kg
Length	2268±11 mm	2280 mm	2268±11 mm
Fuze	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes
Filler	TNT	TNT	Sorel Cement
Filler Weight	~87 kg	~46 kg	-
Ball Amount	-	~37000	-
Crater Diameter	8 m	-	-
Hazards Fragmentation Distance Range (HFDR)	220 m	-	-
Maximum Fragmentation Distance Range (MFDR)	1810 m	-	-
Packing	6 pcs in a metal pallet		



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1000 LB. MK 83 GP AIRCRAFT BOMB

MK 83 GP



MK 83 GP

Weight w/o Tail Assembly	410 (± 20) kg (w/nose plug - w/shipping cap)
Length w/o Tail Assembly	1933 $\pm$ 10 mm (w/nose plug - w/shipping cap)
Maximum Diameter	~355 mm
Filler	TNT
Filler Weight	~190 kg
Center of Gravity	1095 $\pm$ 10 mm (w/nose plug - w/shipping cap)
Fuze	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes
Packing	2 pcs in a metal pallet

2000 LB. MK 84 GP AIRCRAFT BOMB



MK84 HE

**MK84
PRACTICE**



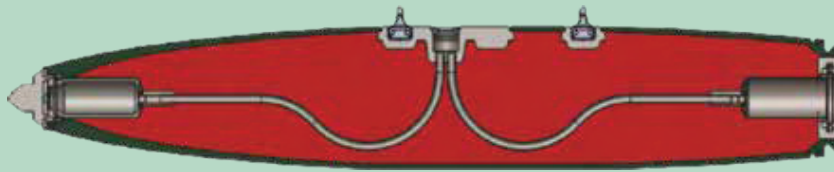
MK84 HE

MK84 PRACTICE

Weight	~884 kg	~884 kg
Length	3797 mm	3797 mm
Fuze	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes	M904, M905, Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes
Filler	TNT	Sorel Cement
Filler Weight	~428 kg	-
Crater Diameter	14 m	-
Hazards Fragmentation Distance Range (HFDR)	380 m	-
Maximum Fragmentation Distance Range (MFDR)	2100m	2100m
Packing	2 pcs in a metal pallet	

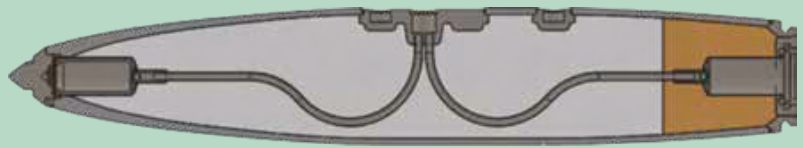


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**500LB. MKE 82
Low-Collateral Aircraft Bomb**

**500LB.MKE 82-T
Thermobaric Aircraft Bomb**



MKE 82-T Thermobaric Aircraft Bomb

Weight w/o Tail Assembly	228 (+12/-20) kg (w/nose plug – w/shipping cap)
Length w/o Tail Assembly	1632±10 mm (w/nose plug – w/shipping cap)
Maximum Diameter	~273 mm
Filler	PBP-003 Thermobaric explosive (PBXN-113 equivalent)
Explosive Filler Weight	~87 kg
Center of Gravity	875±10 mm (w/nose plug – w/shipping cap)
Fuze	Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes
Packing	6 pcs in a metal pallet

MKE 82 Low-Collateral Aircraft Bomb

Weight w/o Tail Assembly	233±20 kg (w/nose plug – w/shipping cap)
Length w/o Tail Assembly	1632±10 mm (w/nose plug – w/shipping cap)
Maximum Diameter	~273 mm
Filler	TNT and Sorel Cement
Explosive Filler Weight	~11.5 kg
Center of Gravity	875±10 mm (w/nose plug – w/shipping cap)
Impact Radius	max 183 m
Fuze	Tail Fuze (Onur 1 MOD 3 series, Onur 2 series, FMU-139 series and FMU-152 series fuzes)
Packing	6 pcs in a metal pallet

NEB/NEB-T PENETRATOR BOMB



NEB

NEB-T (Thermobaric)

Platforms	F-4E/2020, F-16	F-4E/2020, F-16
Weight	~870 kg	~870 kg
Length	~2600 mm	~2600 mm
Diameter	~457 mm	~457 mm
Explosive	PBXN-110	PBXN-110
Augmenting Charge	PBXN-109	Thermobaric Explosive PBP-003 or PBP-003-02 (equivalent of PBXN-113)
Explosive Weight	~24 kg	~24 kg
Augmenting Charge	~35 kg	~35 kg
Follow Through Bomb		
Guidance	HGK, GBU-10 E/B	HGK, GBU-10 E/B
Penetration	Min 2.1 m, 35 MPa (5000 psi) reinforced concrete	Min 2.1 m, 35 MPa (5000 psi) reinforced concrete
Fuze	Augmenting charge: ONUR-1 MOD4 Follow through bomb FMU-152 A/B 3" hard target fuzes	Augmenting charge: ONUR-1 MOD4 Follow through bomb FMU-152 A/B 3" hard target fuzes
Storage Life	10 years	10 years

Targets Buried Hard Targets

- Munition depots
- Underground petrochemical depots
- Bunkers
- Aircraft Shelters
- Command / Control Centers

Surface Targets

- Aircraft runways
- Dams
- Bridges
- Critical Buildings

Area Targets

- Radar antennas
- Stationary Air Defense Missile Sites
- Industrial Facilities
- Parked aircrafts

4.5 LB. & 25 LB. AIRCRAFT TRAINING & PRACTICE BOMBS



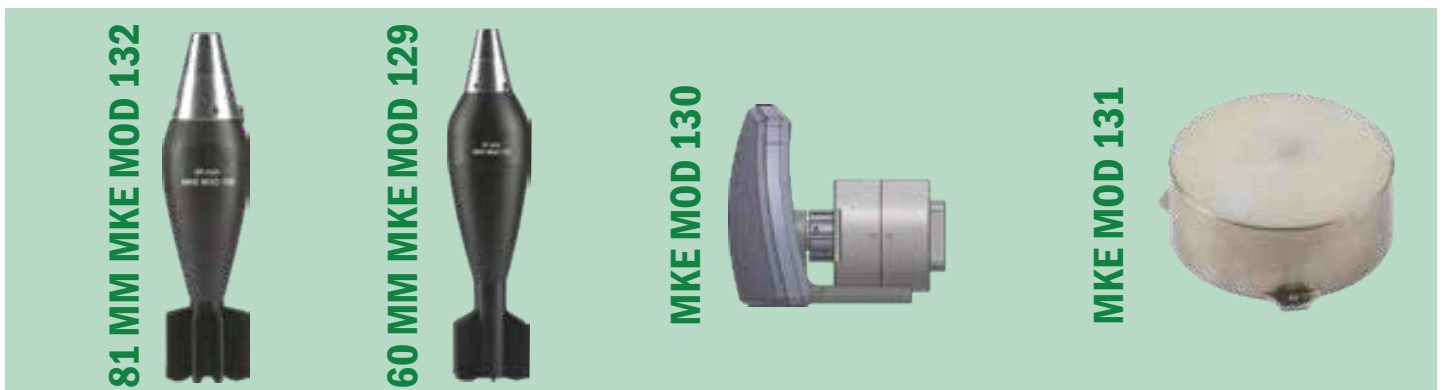
**4.5 Lb
MK 106 MOD 1**

**25 Lb
MK 76 MOD 2**

**25 Lb
BDU 33 D/B**

Weight	2041 g	11339 g	11339 g
Length	495 mm	575±2.5 mm	575±2.5 mm

UAV AMMUNITION



**81 mm
MKE MOD 132**

**60 mm
MKE MOD 129**

**MKE
MOD 130**

**MKE
MOD 131**

Complete Round Weight	~1900 g	~835 g	~700 g	~300 g
Complete Round Length	337 mm	245 mm	-	-
Filler	Comp B	Comp B	C4	C4
Filler Weight	~550 g	~160 g	~450 g	~95 g
Body Material	Composite	Composite	Plastic	Plastic
Cap Material	-	-	-	Steel
Fragment Amount	1296 pcs	480 pcs	820 pcs	688 pcs
Fuze	MKE MOD 128 UAV Mortar Ammunition Fuze	MKE MOD 128 UAV Mortar Ammunition Fuze	Electronic Fuze (STM)	-
Impact Diameter	-	-	~10 m	-
Weapon Used	Kargu UAV	Kargu UAV	Kamikaze UAV	Fixed Wing UAV

SHAPED DEMOLITION CHARGE



**40 lb.
MKE MOD 83
(M3A1)**

**15 lb.
MKE MOD 84
(M2A4)**

**MKE MOD 85
(EXROD)
(MK23 MOD 0)**

**MKE MOD 86
(EXROD)
(MK24 MOD 0)**

Cone Material	Steel	Indicated Below	Copper	Copper
Body Material	Composite	Composite	Plastic (ABS)	Plastic (ABS)
Diameter	~245 mm	~182 mm	~45 mm	~80 mm
Total Height (w/stand) (w/o Stand)	~750 mm ~395 mm	~408 mm ~310 mm	- ~50 mm	- ~86 mm
Total Length	-	-	~110 mm	~150 mm
Complete Round Weight (w/stand) (w/o Stand)	~18,6 kg ~16,7 kg	Indicated Below	~210 g ~170 g	~700 g ~660 g
Main Charge	Comp B	Comp B	Comp C4	Comp C4
Main Charge Weight	~12500 g	~5800 g	~65 g	~415 g
Booster	Comp C4	Comp C4	-	-
Booster Weight	~75 g	~75 g	-	-
Performance Hole Depth Hole Diameter	On reinforced concrete ~1500 mm ~89 mm	Indicated Below	On steel plate min 7 mm min 10,9 mm	On steel plate ~15 mm ~14,3 mm
Packing	1 pc of demolition charge and stand/ wooden box	2 pcs of demolition charge and stands /wooden box	2 pcs of Demolition Charge / plastic container, 42 plastic containers and stands+sighting devices / wooden box	2 pcs of Demolition Charge / plastic container, 16 plastic containers and stands+sighting devices / wooden box

	TYPE 1	TYPE 2
Cone Material	Aluminum	Copper
Complete Round Weight	~7660 g	~9060 g
Performance on the Plain Ground Hole Depth Hole Diameter	~1300 mm ~450 mm	~1600 mm ~300 mm

15 lb. MKE MOD 84 (M2A4)

IGNITION CHARGES AND PRIMERS

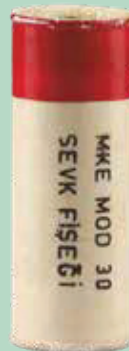
**M5A1 IGNITION CHARGE
AND M32 PRIMER**



**MKE MOD 29 IGNITION
CHARGE AND M34 PRIMER**



**MKE MOD 30 IGNITION
CHARGE AND M34 PRIMER**



**MKE MOD 37
IGNITION CHARGE**



**M5A1 Ignition
Charge and
M32 Primer**

**MKE MOD 29
Ignition Charge
and M34 Primer**

**MKE MOD 30
Ignition Charge
and M34 Primer**

**MKE MOD
37 Ignition
Charge**

Ignition Charge Weight	~5 g	~12 g	~14 g	~206 g
Ignition Charge Height	~36 mm	~49 mm	~54 mm	~145 mm
Ignition Charge Body Material	Craft Paper	Craft Paper	Craft Paper	Craft Paper
Ignition Charge Propellant	M9 Propellant	M9 Propellant	M9 Propellant	M8 Propellant
Ignition Charge Propellant Weight	~3.2 g	~6.5 g	~6.5 g	~30 g
Primer	M32 Primer	M34 Primer	M34 Primer	Percussion Primer
Primer Weight	~22 g	~48 g	~48 g	-
Primer Material	Brass	Brass	Brass	Brass
Primer Propellant	Black Powder	Black Powder	Black Powder	Black Powder
Ammunition Used	60 mm M49A2 and MKE MOD 257 Mortar Ammunition	81 mm M43A1B1, MKE MOD 273 Mortar Ammunition	81 mm MKE MOD 214, MKE MOD 238, M301 A2 Mortar Ammunition	120 mm MKE MOD 209, MKE MOD 228, MKE MOD 236 A1, MKE MOD 250 Mortar Ammunition

BLOCK DEMOLITION CHARGES



1/2 lb.

1 lb.

2.5 lb.

Weight	~250 g	~500 g	~1150 g
Dimensions	49x93x49mm	49x176x49mm	59x300x59 mm
Filler	TNT	TNT	Comp C4
Packing	100 pcs/wooden box	50 pcs/wooden box	20 pcs/wooden box

SALUTING CHARGES



**60 MM
MKE MOD 82
SALUTING CHARGE**

**105 MM
HOWITZER
SALUTING CHARGE**

**105 MM
TANK GUN
SALUTING CHARGE**

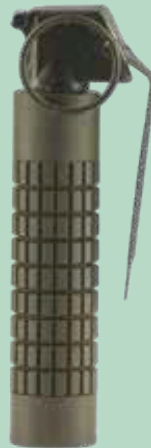
Complete Round Height	~160 mm	~184 mm	~214 mm
Cartridge Case	MKE MOD 82	Shortened M14	Shortened MKE MOD 26
Propellant Weight	~133 g	Type 1: 175 g Type: 425 g	~805 g
Primer	MKE MOD 73 Primer Assembly with M35 Primer	MKE MOD 89 Primer Assembly with M35 Primer	MKE MOD 27 Electrical Percussion Primer
Weapon Used	60 mm Saluting Gun	105 mm Howitzers	Tanks with 105 mm Gun
Packing	1 round / plastic container 30 plastic containers / wooden box	1 round / fiber container 10 fiber containers / wooden box	1 round / fiber container 10 fiber containers / wooden box

HAND GRENADES

**MKE MOD 50
PRE-FRAGMENTED DEFENCE**



MKE MOD 119 OZOK



**MKE MOD 125
THERMOBARIC**



**MKE MOD 50 PRE
FRAGMENTED
DEFENCE**

**MKE MOD
119 OZOK**

**MKE MOD 125
THERMOBARIC**

Complete Round Length	103 mm	138 mm	140 mm
Complete Round Weight	385 g	325 g	800 g
Body Diameter	61 mm	27 mm	57,5 mm
Body Length	~ 73 mm	~ 111 mm	113 mm
Body Material	Plastic	1020, 1030 Steel	Plastic
Fragments	Steel (1600 pcs)	Steel (162 pcs)	Steel (620 pcs)
Filler	Comp-B	C4 or TNT	Thermobaric Explosive PBP-003 (equivalent of PBXN 113)
Filler Weight	~ 32 g	~ 34 g	210 g
Fuze	MKE MOD 117	MKE MOD 49	MKE MOD 49
Fuze Delay Time	3.9 - 5.2 s	3,9 - 5,2 s	3,9 - 5,2 s
Impact Radius	~ 10 m	-	min 11 m
Sound Intensity	-	128 decibel (@10 m)	-
Packing	10 fuzes / plastic box 4 plastic boxes and 40 hand grenades / wooden box	10 fuzes / plastic box 4 plastic boxes and 40 hand grenades / wooden box	10 fuzes / plastic box 4 plastic boxes and 40 hand grenades / wooden box

HAND GRENADES



MK2 DEFENCE

MK2 MOD 44 DEFENCE

MK2 MOD 46 PRACTICE

MK2 PRACTICE

Weight	640 g	640 g	565 g	565 g
Length	120 mm	120 mm	120 mm	120 mm
Body Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Filler	TNT or Comp B	TNT or Comp B	Sorel Cement	Sorel Cement
Filler Weight	~35 g	~35 g	-	-
Fuze	MKE MOD 45 or MKE MOD 45 B1	M204A2 or M204A2T1	MKE MOD47 or MKE MOD47B1	M205A2 or M205A2T1
Delay Time	3,90 - 5,20 s	3,90 - 5,20 s	3,90 - 5,20 s	3,90 - 5,20 s
Packing	10 fuzes / plastic box 4 plastic boxes and 40 hand grenades / wooden box			

**MKE MOD 56 A1 B1
RIOT CONTROL**



**MKE MOD 48
OFFENSIVE**



**MK3 A2
OFFENSIVE**



MKE MOD 56 A1 B1 RIOT CONTROL

MKE MOD 48 OFFENSIVE

MK3 A2 OFFENSIVE

Weight	264 g	335 g	335 g
Length	175 mm	145 mm	145 mm
Body Length	-	111 mm	111 mm
Body Material	Plastic	Craft Paper	Craft Paper
Filler	OC	TNT	TNT
Filler Weight	~12 g	~250 g	~250 g
Fuze	MKE MOD 57	MKE MOD49 or MKE MOD49 B1	M206 A2 or M206 A2 T1
Packaging	10 fuzes / plastic box 4 plastic boxes and 40 hand grenades / wooden box		

2.75 INCH ROCKET WARHEADS



M151 (HE) DEMOLITION

MK61 MOD0 PRACTICE

MKE MOD 248 SMOKE/SIGNALING

Length	~328 mm (w/o fuze)	~278 mm (w/o fuze)	~408 mm (w/fuze)
Weigh (w/o fuze)	~4040 g	~2800 g	~3500 g
Filler	Comp B	-	Smoke / Signaling flare
Filler Weight	~1043 g	-	-
Fuze	M423, M427, MKE MOD 155	-	M427 (no booster)
Packaging	1 round / fiber container 4 fiber containers / wooden box		

CLAYMORE MINE (MKE MOD 38)

Weight	1330 g	Weight	~400 g
Complete Length	218 mm	Complete Length	~850 mm
Complete Width	232 mm	Complete Width	30 pcs / wooden box
Filler	Comp C4		



MKE MOD 51 (M82) PRIMER

Type	Percussion
Total Weight	63,5 g
Total Length	4,93 cm
Filler	1,43 g black powder
Weapon Used	155 mm: M109A1, M109 175 mm: M107 8 in: M55, M110, M110E2
Packing	20 pcs/fiber container 25 pcs fiber container / wooden box





PROPELLING CHARGES FOR HOWITZER AMMUNITION



M3A1

M4A2

M119 A2

Description	The M3A1 propelling charge is a green bag type designed for use in 155mm howitzers for firing in Zones 1 through 5.	The M4A2 propelling charge is a white bag type designed for use in 155mm howitzers for firing in Zones 3 through 7.	The M119A2 propelling charge is a Zone 7 red bag charge for firing in 155mm Howitzers containing M185 and M199 cannon tubes
Cannon Used With	M1, M1A1, M45, M126, M126A1, rd M185, M199, Panter and Firtina (from 3 green bag)		M185 (M109A1/A2/A3; M199 (M198), Panter, Firtina
Diameter	max. 127 mm	max. 127 mm	max. 158 mm
Complete Length	max. 406, min. 355	max. 534, min. 483	max. 725
Complete Round Weight	~2,8 kg	~6,35 kg	~10,7 kg
Type	Green bag, separate loading	White bag, separate loading	Red bag, separate loading
Ignition Charge	CBI propellant; 100 g	CBI propellant; 100 g	CBI propellant; 113 g
Propellant	Single perf. M1 propellant (~2,5 kg)	Multi perf. M1 propellant (~6,1 kg)	M6 propellant (9.5 kg)
Flash Reducer	Potassium Sulphate	Potassium Sulphate	Potassium Sulphate
Primer Type	Separate primer, MKE MOD 51, M82, MK2A4 or equivalents	Separate primer, MKE MOD 51, M82, MK2A4 or equivalents	Separate primer, MKE MOD 51, M82 or equivalents

M1

M2

Use	Green bag propelling charge is used for zone firing with Charges 1 to 5 in 8" howitzer cannons	White bag propelling charge is used for zone firing with Charges 5 through 7 in 8" howitzer cannons
Description	The charge consists of a base section (Charge 1) and four unequal increments (2 through 5) of propellant M1 in green cloth bags	The charge consists of a base section (Charge 5) and two unequal increments (6 and 7) for zone firing
Cannons Used With	M2, M2A1 (M115), M47 (M55), M2A2 (M110)	M2, M2A1 (M115), M47 (M55), M2A2 (M110)
Diameter	Max 165.1 mm	Max 196.8 mm
Complete Length	Max 533.4 mm	Max 609.6 mm
Type	Green bag, separate loading	White bag, separate loading
Ignition Charge	Red Igniter pad containing black powder (~ 142 g)	Red Igniter pad containing black powder (~ 142 g)
Propellant	Single perf. M1 propellant	Multiperf. cylinder M1 propellant
Propellant Weight	~6 kg	~ 13 kg
Flash Reducer	-	M3



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