

Military
Explosives &
Propellants

Military Explosives

EXPLOSIVES

S. No.	Type of Explosive	Specification	Melting point	Utilization
1	TNT	DEF-STAN 07-4/1(a)	80.2 – 80.4°C	Manufactured in the form of flakes suitable for filling shells, bombs and for preparation of different compositions with RDX.
2	RDX	DEF-STAN 07-23	201-208°C	Crystalline product used for manufacture of plastic explosive like PE-3A, and compo A&B.
3	COMPO B 1. RDX/TNT 60:40 2. RDX/TNT 70:30	CS 5446 (b) Pak Explo-38A (a)	- -	Manufactured in the form of flakes and biscuits. Suitable for filling shells and bombs.
4	RDX/WAX/Al No. 2 71:9:20	DEF-STAN 07-31	-	Filling of shells.
5	PE-3A (Plastic Explosives)	CS 2436 A(a)	-	Demolition works.
6	PETN	DEF-STAN 07-08/1	139-142°C	Crystalline products used in the manufacture of detonators and Fuses.
7	PETN Plasticised	Pak Explo 31	-	Filling of Hand Grenades.
8	Tetryl (CE)	DEF-STAN 13-165/1	128.5- 129.1°C	Manufactured in granular form. Pressed tetryl pellets are used in different primers, detonators, bombs and shells.
9	Picrite	DEF-STAN 07-12/1	-	Manufactured in the form of fine white powder (Nitro Guanidine) triple base propellant.
10	Gun Powder G-7, G-12, G-20,G-40, GP-Mealed Sulphurless/ G.P Sulphurless/M.P	DEF-STAN 13-167/1 DEF-STAN 13-166/1		Suitable for use in various primers and pyro compositions.
11	Styphnic Acid	DEF-STAN 07-50/1	176-181°C	Lead salt of this acid is used in the preparation of Cap composition for different ammunition.
12	Di-Nitro-Resorcinol	DEF-STAN 13-43 (b)	146-148.5°C	Used in initiator composition.
13	RDX/WAX 95.5 RDX/WAX 96:4 RDX/WAX 98:2	PAK EXPLO 32 PAK EXPLO 55		Manufacture in the form of grains, used for filling of Shells.
14	Strontium Peroxide	DFF-STAN 13-15/1		Used in tracer Compositions

Mortar Bombs and Rockets

Mortar Bombs

S. No.	Description	Type, Shape and Major Characteristic	Applicable Specifications	Applicable Weapons
1	Propellant for 60 mm Mortar	Strips 10-2.5/33, perforated Mortar Gun rings 10-24/48 separation disk 11 x 46 x 100	60 mm	WJ 19-67W (chinese)
2	Propellant for 81 mm Mortar	Ballistite GB Pa(1.5), Ballistite GB Pa(2.5)	81 mm Mortar Gun	Hotchkiss Brandth No. 922103, 922104
3	Propellant for 120 mm Mortar	Ballistite GB Pa(2.5), Ballistite GB Pa(8)	120 mm Mortar Gun	Hotchkiss Brandth No.IU-922106 PAK Ammo-134

Rockets

1	Propellant for 122 mm Rocket	Types SQ-2, extruded solventless double base, single perforated cylindrical grains with ends inhibition	6m -21 Field MBRL	WE-1017 JTW (Chinese)
2	Propellant for 40 mm antitank rocket assisted HEAT projectile type 69	Double base solventless expelling and booster charges	RPG-7 Launcher	WE 131 JTW (Chinese) Pak Ammo-104, 136
3	Propellant for cartridge RG 7.62 x 51 mm P2A1	Double base smokeless powder Ballistite 3.5	G3A3 Rifle	Pak Ammo-123
4	Propellant for 73 mm FSRA HEAT round SPG-9	Double base solventless expelling and booster charges	SPG-9 Launcher	Pak Ammo-124, 125

Small Arms Ammunition

1	NC-1055	Single base, Single perforated grains, deterrent coated	7.62x51 mm Ball & 7.62x51 mm Tracer	Pak Ammo-86(c) Pak Ammo-76(F) Firing (ballistics)
2	NC 1111	Single base, square flakes	12 bore cartridge	TM 826 (Bofars)
3	P-2 MK 2Z	Single base cylindrical grains	9 mm MP5A2 Sub machine gun	Pak Ammo-117
4	HN 4/7	Single base, 7 perforated cylindrical grains	12.7x108 mm	WJ 16-67W (Chinese)
5	HN 5/7 Glazed (Chinese design)	Single base, 7 perforated cylindrical grains	Practice, API & HEI cartridges for 30 mm, aircraft gun ammunition	WJ 16-67W (Chinese)
6	P-3	Single base, cylindrical grains	7.62 x 51 mm Blank	Pak Ammo-122

Propellants

(For Guns & Howitzers Ammunition)

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
1	HN7/14 (Chinese design)	Single base 14 perforated rosette grains	Cartridges for anti 37 mm aircraft machine gun	WJ 7-67 W (Chinese)
2	P-1	Double base, 7 perforated cylindrical Grain	Cartridge 106 mm HEAT	Pak Ammo 75
3	NQ/M 0.046	Triple base, 7 perforated cylindrical grains	100 mm tank gun APFSDS ammunition & 105 mm Tank gun APFSDS ammunition	P-323 A(g) U.K
4	Prop MI SP & MP	Single base with DNT, single & 7 perforated grains	Charges for 105 mm HOW M67	Pak Ammo 98
5	4/1 & 9/7	Single base single & 7 perforated grains	122 mm charges	WJ-17-67 W (Chinese)
6	12/1 & 9/7	Single base single & 7 perforated grains	130 mm S.R gun charges	WB-005 PFI WJ-17-67 W (Chinese)
7	Prop 3-23/1-37	Double base solventless single perforated	130 mm L.R gun charges	WJ-18-64
8.a	Prop M1 SP (0.0157 inch)	Single base with DNT, single perforated grains with flash reducing agent	155 mm HOW for charges M3A1 (green bag)	MIL-STD 652 D(AR) MIL-C-60418 B(AR) Jan-P-309
8.b	Prop M1 MP (0.0336 inch)	Single base with DNT, 7 perforated grains with flash reducing agent	155 mm HOW for charges M4A2 (white bag)	MIL-P-60397 B(AR) JAN-P-309
9.a	Prop M1 SP (0.0171 inch)	Single base with DNT, single perforated	203 mm HOW for charges M1 (green bag)	MIL-STD 652 D(AR) MIL-P-46698 MU JAN-P-306
9.b	Prop M1 MP (0.043 inch)	Single base with DNT, multi perforated	203 mm HOW for charges M1 (white bag)	MIL-STD 652 D(AR) MIL-C-46695 A(MU) JAN-P-309
10	Propellant for 100/105 mm HESH	Single base with DNT, 7 perforated	Charges for mm 100/105 HESH	P-328
11	Propellant 3-18/1-26 for 100 mm HE	Double base solventless single perforated	100 mm HE	WJ-18-67W (Chinese)
12	Propellant 19/1-25 & 16/19	Single base, single hole sticks of 250 mm, length & 19 hole hexagonal Grains	125 mm APFSDS	WMD 603 AJT

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
13	Propellant 16/1-35 & 14/19	Single base, single hole sticks of 350 mm, length & 19 hole hexagonal Grains	125 mm HE	WMD 603 AJT
14	Propellant 4/1 & 9/7	Single base, single hole grain & 7 hole grain	122 mm HOW D-30	Pak Ammo-137
15	Prop M6-MP (0.055 inch)	Single base with DNT, cylindrical grains with 7 longitudinal perforations with flash reducing agent	155 mm HOW for charges M119A2 (Red Bag)	Pak Ammo-130
16	Prop 12/1-27 & 12/7	Single base, single hole sticks of 265 mm length & 7 longitudinal perforations cylindrical grains	122 mm HOW D-30 FC	Pak Ammo-139 Pak Ammo-138
17	Propellant 3/1	Single Base	122 mm HOW D-30	Pak Ammo-135
18	Prop M11MP (0.0336 Inch)	Single Base multi Perforated with DNT	105 mm TK HE	Pak Ammo-60

Propellants - Small Arms Ammunition

S.No	Description	Type, shape and major characteristics	Applicable ammunition	Applicable specification
1	NC-1055 for 7.62 x 51 mm Ball & Tracer Ammo.	Single base, Single perforated grains, deterrent coated	G3A3 and MG-3	Pak-Ammo. - 86 (c) Pak-Ammo. -76 (F) (Ballistics)
2	P-3 for 7.62 x 51 mm BLANK Ammo	Single base, cylindrical grains	G3A3 and MG-3	Pak Ammo-122
3	Pyroxyle Powder for 7.62 x 39 mm Ammo	Single base, Single perforated grains, deterrent coated	7.62 x 39 mm SMG Chinese Ammo	Pak Explo.-57
4	NC-1055 for 7.62 x 54 mm Ammo	Single base, Single perforated grains, deterrent coated	7.62 x 54 mm HMG Ammo	Pak Ammo.-86 (c)
5	NC1111	Single base, square flakes	12 Bore Gun	TM-826
6.	P-2 Mk-1Z & 2Z for 9mm	Single base cylindrical grains	Wallther Pistol and MP5A2 Sub Machine Gun	Pak Ammo.-117
7	HN 5/7 Glazed (Chinese design)	Single base, 7 perforated cylindrical grains	30 mm Aircraft Gun	WJ 17-67 (W)

Propellants - for Guns & Howitzers Ammunition

1	CBI for 125 mm APFSDS & HE Ammo	Single base, Single perforated grains, deterrent coated	125 mm Tank Gun	Pak Ammo-133
2	CBI for 155 mm HOW Ammo.	Single base, square flakes	155 mm HOW	Pak Ammo.-127
3.	Propellant for 23 mm Ammunition	Single base, Single perforated, cylindrical grains	23 mm Aircraft Gun	EPD-1
4	NQ/M 0.046 for 100 mm APFSDS & 105 mm APFSDS Ammo.	Triple base, 7 perforated cylindrical grains	100 mm & 105 mm Tank Gun	P-323 A (g)
5.	WM-017 for 105 mm & 122 mm HOW (BLANK) Ammo.	Double base Propellant cords	105 mm Gun & 122 mm HOW	P/331-1
6.	Propellant 3/1 for 122 mm HOW	Single base, Single perforated grains	122 mm HOW (D-30)	Pak Ammo.-135
7.	NQ-018 & NQ-050 for 25 Pdr Ammo.	Triple base Propellant cords	25 Pdr Gun	P-323 A (g)
8.	P-1 for cartridges 106 mm HEAT	Double base, 7 perforated Cylindrical Grains	106 mm R.R	Pak Ammo.-75