

TECHNICAL DATA

FOR

81 mm HE MORTAR SHELL M72P5

81 mm HE MORTAR SHELL M72P5

GENERAL

The High Explosive Mortar Shell M72P5 is designed for annihilation of live forces and ordnance items in light shelters and beyond them. It is efficiently used for firing at the targets on rear slopes as the mortar enables firing with curved trajectory.

The mortar shell is consisting of the following main components:

- Fuze UTU, M93-N
- Shell body
- Tail unit
- Explosive charge
- Propellant charges

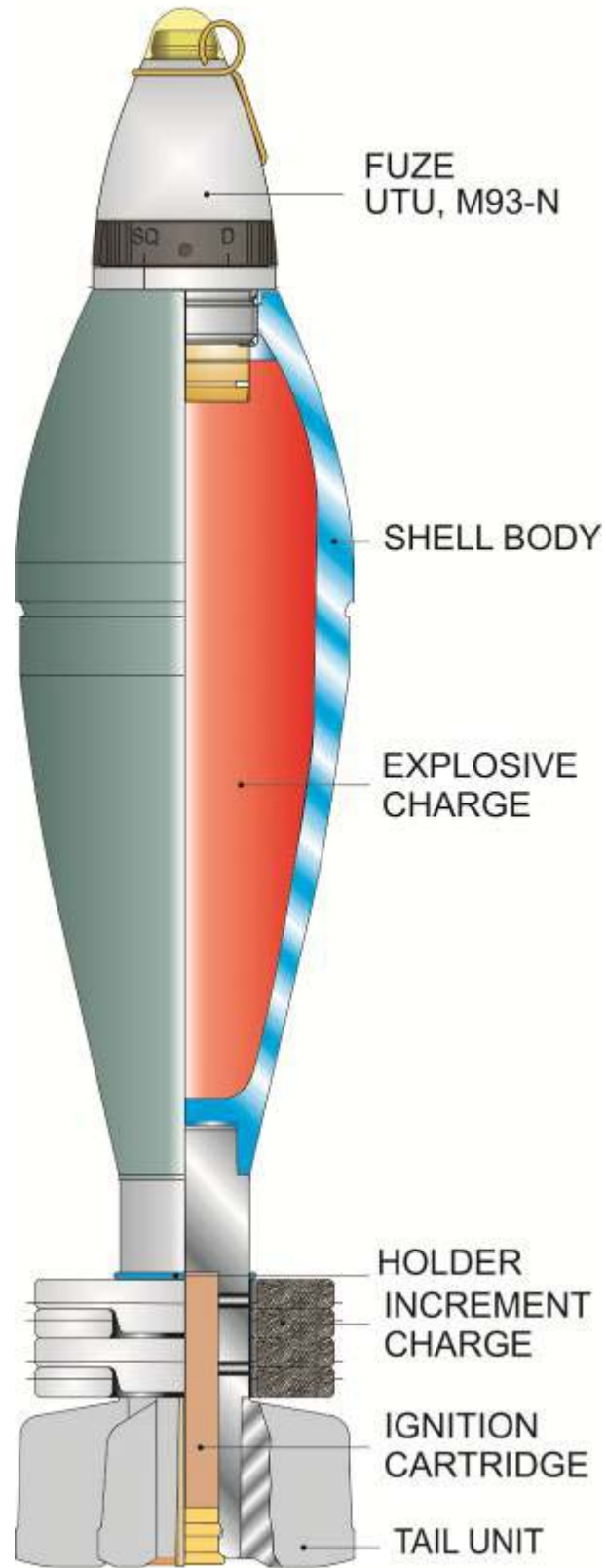
THE SHELL BODY is made of forged steel and unites all the elements of shell as a unit. On the front end it is of ogival shape with an opening and threads in which the fuze is screwed. On the cylindrical part of the shell body there is a cannelure. This part is used for centering of the mortar shell in its passage through the mortar barrel, as well as for sealing of propellant gasses. It is tapered to the rear parts of the shell body ending in the shell tail in which the tail unit is screwed.

THE TAIL UNIT serves to ensure the flight of the shell through the air and to guide it through the mortar barrel. Made of Al-alloy, it is of cylindrical shape with six fins. These have lugs on the rear part for centering of the shell during its passage through the mortar barrel.

Inside the tail unit body there is a housing accommodating the ignition cartridge with 18 flash holes used for flash transmission from the ignition cartridge to the increment charges.

EXPLOSIVE CHARGE in this shell is made of cast TNT, 650g in weight. A safe transmission of the detonation wave is ensured by the effect of the fuze detonator UT, M88P1.

PROPELLANT CHARGE of HE shell M72P5 consists of the ignition cartridge M72 and four increment charges M72P1. Both types of charges are put on the shell and thus kept till use.



TECHNICAL DATA

Length of shell with fuze	400mm
Mass of mortar shell with fuze	3.18 kg
Type of explosive	TNT
Mass of explosive	0,65 kg
Shell body material	forged steel
Mass of shell body	2.1 kg
Tail unit material	Al alloy
Mass of tail unit	0,18 kg
Ignition cartridge case	Cardboard
Ignition cartridge M 72	NGB-051
Increment charge M 72P1 in celluloid container	EI- 6642
Type of fuse : UTU, M93-N	Point detonating with delay
Muzzle safety when firing with ignition cartridge	50 m
Service life for complet round, fuze,	
Increment charge and body	15 years
Reliable function within temperature range	- 30 ⁰ to +50 ⁰ C
Fully safe during handling, transport & parachuting	
Simple overhaul	

BALLISTIC DATA FOR MORTAR 81mm M69B

Propelling	Xmax (m)	Barell Length (mm)	Pressure in Barrel (bar)
O+4	4870	1150	≤ 618

FUZE UTU, M93-N

UTU, M93P1 and UTU, M93-N is mechanical, point-detonating, impact fuze of superquick and delay action equipped with hard transport safety element including an ancillary safety mechanism.

A. Purpose

The fuze is intended for HE mortar shell of all calibers.

B. Technical data



Safety	as per MIL-STD-1316 B
Arming	inertia type
Low – explosive train interrupted	
Equipped with status indicator (armed, non – armed)	
Acceleration	from 400g to 13000g
Drop safety	3m
Moisture proofness	at 1 bar pressure
Fuze mass	240 g
Detonator charge mass	13,2g
Fuze length	max. 105mm
Fuze length entering the shell	max. 28mm
Fuze connecting thread	1,5” – 12 UNF - 1A
Maximum fuze diameter	49mm

C. Functional data

Muzzle safety at initial velocity 68m/s	min. 50m
Action type	superquick and delay
Time delay	from 30ms to 50ms
Temperature range of use	-46°C to +63°C
Temperature range of storage	-54°C to + 71°C
High safety during handling, transportation and storing.	
Environmental test	as per MIL-STD-331A
Usage period is minimum 15 years under prescribed keeping and storing conditions.	

NATO STOCK NUMBER (NSN) 1390-73-000-0252

PACKING HE MORTAR SHELL 81 mm M72P5

- WOODEN BOX PROTECTED IN TROPICKAL CONDITIONS
- 1 COMPLETE SHELL PER CARTON
- 5 CARTON PER WOODEN BOX
- TOTAL MASS 29 kg.
- TOTAL VOLUME 0,042 m³
- HAZARD CLASS 1.2E
- UN°0321

