Ammunition for the changing role of the tanks in modern battlefield

JACOB MOAV

April 2008
World War 1 – Infantry Support
World War 2 – Combined Arms Team
Cold War – The Ultimate A.T. Weapon
Cold War – The Ultimate A.T. Weapon

HEAT-MP-T  APFSDS-T
Main Role of the Tank: Direct Fire Support
21st Century – Asymmetric warfare
APAM
Anti-Personnel/Anti-Materiel Multi-Purpose Tank Round

THE AMMUNITION OF TOMORROW
TODAY FROM IMI

Unclassified 04-08
APAM - A True Multi-Purpose Round

- Infantry & AT Squads
- Hovering Helicopters
- Light Armour
- MOUT
- Wall Breaching
- Concrete Wall
- Earth & Timber Bunkers
**APAM – Basic Modes of Operation**

- **Ejection Mode** — Ejected Warheads explode sequentially in the air after separation.
  - ✔ Anti-Personnel
  - ✔ Anti-Helicopter

- **Impact Mode** — Entire projectile explodes as a unitary warhead upon impact.
  - ✔ LAV’s
  - ✔ Bunkers & Buildings
APAM Anti-Personnel/Anti-Materiel ROUND

120 mm
- Length (mm): 984
- Weight (kg): 26
- Muzzle Vel. (m/s): 930

Status
- 105 mm in operational use.
- 120 mm in FSD.

105 mm
- Length (mm): 998
- Weight (kg): 24.7
- Muzzle Vel. (m/s): 800

Battle proven

Electronic
Time Fuze

Warheads

Impact Fuze

Tracer

Primer

Propellant

Ejection Charge

Projectile

Cartridge
APAM 105 - DYNAMIC ARENA TEST

direction of fire

Dust raised by fragments
APAM 105 – Anti-Materiel Mode

light armour

double reinforced concrete wall

hits on witness plate
APAM 105 - Damage to Sand & Timber Bunker
APAM 105 - Wall Breaching Capability
(with optional SQ fuze)
ANTI HELICOPTER CAPABILITY

Side view

Side view-concealed target

Front view
MILITARY OPERATIONS IN URBAN TERRAIN
HE-MP-T 120mm, M339
(High Explosive – Multi Purpose - Tracer Tank Round)

Projectile

Propelling System

Projectile in flight
**HE-MP-T 120**
**MISSION STATEMENT**

To provide multi-purpose round for Main Battle Tanks (MBTs) against targets other than tanks:

- To penetrate bunkers and buildings with maximum resulting damage
- To breach walls, allowing passage of friendly troops
- To destroy light armored vehicles (LAV’s)
- To incapacitate infantry, especially AT squads (Ambush)
HE-MP-T 120

Modes of Operation

- Air-burst (AB)
- Impact W/Delay \([\text{Delay} = f(\text{range})]\)
- Impact - Super Quick [S.Q.]

“Extra” features –
- Grazing functioning
- Impact W/Delay as default set
105 / 120 mm STUN CARTRIDGE
(Less-Than-Lethal tank round)
Video film of the firing test
The Stun Cartridge creates:

- Cloud of smoke with plastic flakes
- Noise
- Pressure (Blast)
The cartridge can be used with all standard 105/120 mm Western tank guns.

The stun cartridge can be loaded, unloaded, stowed and stored like any other tank round.

This cartridge is indispensable for every armor force when action in urban and other populated terrains.