

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

OPERATOR INFORMATION  
 FOR CARTRIDGE 40MM: NON-LETHAL, XM1006  
 (40mm SPONGE GRENADE-MODIFIED GOVERNMENT VERSION)  
 FOR 40MM M203 GRENADE LAUNCHER

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10 JULY 1998

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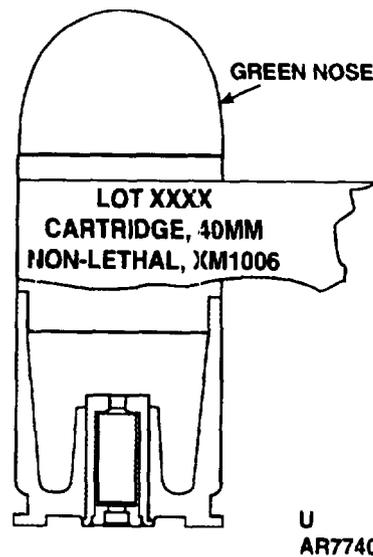
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**SECTION I: INTRODUCTION.**

Data presented in this Technical Bulletin will not be incorporated into any of the ammunition and weapon technical manuals. This bulletin is only for use in Operations by Task Force Eagle.

**SECTION II: DESCRIPTIVE DATA.**

Nomenclature: Cartridge, 40MM: Non-Lethal, XM1006 (Sponge Grenade - Modified Government Version) for 40MM, M203 Grenade Launcher.  
 (See fig. 1).



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Figure 1, Cartridge, 40MM, XM1006 (Sponge Grenade - Modified Version)

**DESCRIPTION/OPERATION:**

The subject cartridge is the point target blunt impact munition for the 40MM, M203 Grenade Launcher designed by the US Army Research Laboratory, Aberdeen Proving Ground, MD. Its formal nomenclature as part of the Soldier Enhancement Program to type classify it as "CARTRIDGE, 40 MILLIMETER: NON-LETHAL, XM1006".

The item is also referred to as:

- a. Non-Lethal Cartridge, 40MM.
- b. 40MM Practice M781 Round Modified with Foam Rubber Projectile.
- c. 40MM Foam Rubber Cartridge.

Subject cartridge is NOT the same as the 40MM Foam Rubber Multiple Baton Rd (made by DEFTEC).

The 40mm Multiple Rubber Ball Round (40B Stinger) and the 40mm Multiple Foam Rubber Baton Round (40F) contain black powder propellant. The M203 Grenade Launcher can only fire five to 20 rounds of 40B and/or 40F before black powder or seared rubber residues from the 40B/40F projectiles/batons will prevent firing additional rounds. The barrel of the M203 Grenade Launcher must be thoroughly cleaned of residue before firing any other type of round. Failure to clean barrel of residue can result in the projectile lodged in-bore.

**SECTION III: SAFETY CONSIDERATIONS:**

**WARNING**

- **ALL OF THESE NON-LETHAL MUNITIONS HAVE THE POTENTIAL FOR INFLECTING LETHAL INJURIES AND SHOULD BE USED WITH DISCRETION. DO NOT FIRE AT LIVE TARGETS DURING TRAINING TO AVOID UNNECESSARY RISK AND POTENTIAL LETHALITY.**
- **PROBABILITY OF LETHAL INJURY INCREASES AS DISTANCE**

**BETWEEN OPERATOR AND TARGET LESSENS. DO NOT FIRE THE 40MM XM1006 NON-LETHAL CARTRIDGE AT AN OPERATOR DISTANCE FROM TARGET OF LESS THAN 20 METERS.**

- **AT DISTANCES OF 20 METERS AND GREATER, THE TARGET AREA SHOULD BE CENTER OF MASS.**
- **WHEN AN HE ROUND SUCH AS THE HEDP, M433 OR THE HE, M406 IS FIRED INTO AN OBSTRUCTION, THERE IS A POTENTIAL OF A BLOWN BARREL AND POSSIBLE SERIOUS INJURY.**
- **DO NOT FIRE ANOTHER ROUND OF ANY TYPE TO DISLODGE A PROJECTILE LODGED IN THE BARREL.**
- **DO NOT FIRE A 40MM HEDP/HE CARTRIDGE OR A 40MM XM1006 NON-LETHAL CARTRIDGE FROM A WEAPON THAT HAS FIRED 40B OR 40F AMMUNITION BEFORE THOROUGHLY CLEANING THE BARREL.**

**CAUTION**

FAILURE TO CLEAN BARREL OF BLACK POWDER COMBUSTION RESIDUE AND SEARED RUBBER RESIDUE BEFORE FIRING ANY OTHER TYPE OF ROUND MAY RESULT IN THE PROJECTILE LODGED-IN BORE.

**NOTE**

40 MM non-lethal munitions can not be used with the MK 19 MOD 3 40MM Grenade Machine Gun.

**PRECAUTIONS AND RECOMMENDATIONS:**

- a. Use XM1006 Non-Lethal Cartridge only with the M203 Grenade Launcher. Do NOT use it with the M79 Grenade Launcher (no longer a standard item) or the MK19 MOD3 Grenade Machine Gun (XM1006 not designed for rapid fire).
- b. Use a dedicated M203 gunner for the XM 1006 Non-Lethal Cartridge separate from the M203 gunners that use black powder non-lethal rounds. This will avoid potential for lodged XM1006 projectiles.
- c. Do not fire another round of any type to dislodge a projectile lodged in the barrel.
- d. Fire subject round while aiming at the center of mass of the target chest area.
- e. Observe all specified limits for storage and firing of this munition. Only fire rounds between ambient temperatures of 0 and 125 degrees Fahrenheit.
- f. Do not fire subject round against hard targets/surfaces closer than 20 meters. Eye protection for the gunner is recommended since there is potential for rebounds.
- g. Because no toxic fumes tests were performed, gunners should fire from open, well ventilated positions,
- h. Gunners and all personnel within 20 meters of the firing position should wear single hearing protection (plugs or muffs).
- i. During training and exhibitions, gunners shall not engage live targets.
- j. Do not mix the XM1006 Non-Lethal Cartridge with other types of non-lethal munitions and do not mix with live service ammunition of the same caliber.

k. Use the standard 50 meter leaf sight setting. The XM1006 Non-Lethal Cartridge (Modified Government Version) configuration matches the trajectory of standard 40 MM ammunition (M781 Practice, M433, HEDP out to 50 meters.

l. Plastic residue on the barrel rifling produced from firing the XM1006 cannot be removed with the standard M203 Cleaning Kit bore brush. Use the bore brush from the 40MM, MK19 Grenade Machine Gun Cleaning Kit or fire a 40MM, M781 Practice or 40MM, M433, HEDP cartridge to remove the residue.

**SECTION IV: TABULATED DATA:**

Length .....	3.95 in.
Diameter.. .....	40 mm
Cartridge weight.....	0.15 lb
Projectile weight.....	30 gr
Minimum range .....	20 m
Effective range.....	20-50 m (Max range: 175m)
Muzzle velocity.....	265 +/-20 fps
Propellant.....	Winchester Mix (2 grains) Primer:M42C1
Cartridge marking.....	CARTRIDGE, 40MM, NON-LETHAL, XM1006
Packaging .....	22 rounds per M2A1 metal box; 2 metal boxes(44 rounds) per wirebound wooden box
NSN: .....	1310-01-452-1190- BA06
P/N.....	12986143
Hazard Class. ....	1.4C

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