

**SMALL ARMS AMMUNITION**  
**HOT WEATHER/DESERT OPERATION**

**GENERAL.** Sand and dust cause persistent problems with small caliber systems (5.56mm to 40mm). It is important that weapons are maintained (cleaned and lubricated) much more frequently than under normal conditions. "Bright Star" exercise experience shows that cleaning and lubrication were required twice as often as routine weapon maintenance. To avoid attracting grit and sand, wipe off all excess lubricants with a clean, dry cloth.

1. Keep small arms ammunition in closed metal containers and out of the direct rays of the sun as much as practical. If powder is hot, excessive pressure may be developed when the weapons is fired.
2. Protect ammunition from mud, sand, and water. If the ammunition gets wet or dirty, wipe it off at once with a clean dry cloth. Wipe off light corrosion as soon as it is discovered. Turn in heavily corroded cartridges.
3. Clean ammunition, ammunition cans, and magazines with a clean, dry cloth.
4. Ammunition cans, which have been opened and weapon magazines exposed to dirt, dust, and sand, should be unloaded and wiped off daily.
5. Do not lubricate ammunition, ammunition cans, or magazines. Dust and other abrasives that collect on greasy ammunition may cause damage to the operating parts of the machine gun. Moreover, oiled cartridges produce excessive chamber pressure.

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**M16 SERIES RIFLE/M4 SERIES CARBINE (continued)**

For quick confirmation that you have the correct ammunition for the weapon, check the color code of the bullet against this chart:

WEAPON	TYPE OF AMMUNITION	BULLET TIP COLOR CODE
M16A1	M193 Ball	None
M16A1	M196 Tracer	Red
M16A2	M855 Ball	Green
M16A2	M856 Tracer	Red

**7.62MM AMMUNITION.**

1. Protect ammunition from mud, sand, and water. If the ammunition gets wet or dirty, wipe it off at once with a clean, dry rag. Wipe off light corrosion as soon as it is discovered. Turn in heavily corroded cartridges.
2. Do not expose ammunition to direct rays of the sun. If the powder is hot, excessive pressure may be developed when the weapons is fired.
3. Do not oil or grease ammunition. Dust and other abrasives that collect on greasy ammunition may cause damage to the operating parts of the machine gun. Moreover, oiled cartridges produce excessive chamber pressure.
4. Do not fire dented cartridges, cartridges with loose bullets, or otherwise defective rounds.

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7. Wear protective leather or cotton when handling olive drab painted small arms ammunition metal containers.
8. Do not fire dented cartridges, cartridges with loose bullets, or otherwise defective rounds.

**M16 SERIES RIFLE/M4 SERIES CARBINE.**

**WARNING – For proper functioning of your M16 series rifle/M4 series carbine magazine in a hot dry climate, keep the magazine and ammunition clean and free from lubricant. Sand and dust will adhere to the lubricant and possibly cause feeder problems. This could cause injury or death to personnel.**

1. The M16A2 rifle uses M855/M856 (DODIC A059/A063) ammunition. The M16A1 uses M193/M196 (DODIC A071/A068) ammunition.
2. Even though M16A1 (M193/M196) ammunition fits the M16A2 rifle, effective range is reduced to approximately 16 percent.
3. Do **NOT** use M16A2 (M855/M856) ammunition in the M16A1 rifle. M16A2 ammunition is extremely inaccurate when fired in the M16A1. The projectile will start to tumble within a very short distance.

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**M249, 5.66 MACHINE GUN (SAW).**

1. A potential safety problem exists when sand or light grit gets between the top cover and indicator flag. Remove cartridge indicator flag from the weapon prior to using in a sandy/dusty environment.

**CAL .50 MACHINE GUNS.**

1. Use correct ammunition links with cal .50 machine guns. The M2/M3 machine gun requires M2/M9 links. The M85 machine gun requires M15A2 links.

**30MM ALUMINUM-CASED M788 TP and M789 HEDP.**

1. Assure ammunition in storage or during operation is exposed to direct sunlight as little as possible. Assure strict adherence to lubrication/maintenance schedule of the ammo feed system. Excess lubrication can cause problems of gun jamming, case failure, and burn through. Inspect and replace bolts and breeches that exhibit cracking at the base lug.

**MK19 40MM GRENADE MACHINE GUN (GMG).**

1. The only HE rounds to be fired from the MK19 are those with DODIC B542 or the unrestricted B571.
2. Misaligned ammo links are caused during ammo separation when twisting the ammo belt in preparation for loading the MK19. After ammo belt has been separated, ensure ammo links are aligned evenly and touching the copper band on both sides of ammo when loading.