



## DEFENCE UNEXPLODED ORDNANCE WEBSITE ORDNANCE INFORMATION SHEET

**ALL UXO MAY BE HAZARDOUS IF DISTURBED  
DO NOT TOUCH – TAKE A PHOTO – MARK THE LOCATION – CALL THE POLICE**

### MORTAR – 81 MM

#### Description

- ☛ The 81mm mortar has been in service since WW2 and has undergone various developments to modernise both weapon and ammunition. Whilst the Commonwealth forces in WW2 used the British 3" (81.5mm) mortar, the US forces developed the M1 mortar based on the French Brandt mortar, replaced in 1952 with the M29, which was subsequently superseded by the British L16A2 in 1987 (renamed M252 for US use). The L16 81mm mortar was used by Commonwealth forces starting in 1965 and remains in use today; the Australian designation for the L16 is the F2 81mm mortar.
- ☛ The 81mm mortar was also mounted on various vehicles and vessels – mounted in APCs during the Vietnam War and installed on Australian Fremantle class ships (1977-2007).
- ☛ Numerous types and variations of projectile (both US and Commonwealth) have been used throughout the life of the 81mm mortar including the following:
  - **High Explosive (HE)** – Both '*Light*' (M43A1) and '*Heavy*' variants used as well as the British L15A3 – all filled with high explosive. Various fuzes - Point Detonated (PD), PD Delay, Delay - Variable Time.
  - **Chemical (Chem) and Smoke (Smk)** – filled with toxic chemicals or various smoke chemicals (White/Red Phosphorus); normally contains a burster charge and is point detonated.
  - **Illuminating (Illum)** – US & UK variants; base-ejected, parachute-suspended illuminant charge.
  - **Training (Trg)** - (M68) contains no explosive elements except ignition charge.
  - **Practice (Prac, TP)** - (M43A1) Similar to the M43A1 HE shell, contains a black powder spotting charge.
- ☛ Unexploded items of this type are most often found in/near areas used by the Army for infantry live firing practices. UXO are typically being found on or just below the ground surface (to approx 0.5m).

#### Technical Data

- ☛ Munition length : approx. 331-571 mm
- ☛ Projectile diameter : approx. 81 mm
- ☛ Total weight : Projectile – approx 2.2-6.8 kg
- ☛ Fuse/Burster : Various fuzes used (point detonated, time, etc); Smk has a burster charge.
- ☛ Filling : HE - approx 0.5-1.95 kg of explosive; Smk - 0.7-1.9kg White/Red Phosphorus.
- ☛ Identification :
  - US projectiles are usually steel with aluminium fins, British projectiles are all steel.
  - HE munitions are usually painted olive drab/green with yellow markings, Smk & Illum painted grey with black markings and Prac painted blue with white markings.
  - Colours and markings vary across nations and may have faded over time. It can be difficult to distinguish between dangerous and safe items - treat all found munitions as dangerous.

**Images**



**Figure 1 - 81mm HE (Light), M43A1**



**Figure 2 - 81mm HE (Heavy), M56**



**Figure 3 - 81mm WP Smk, M57**



**Figure 4 - 81mm TP, M43A1**



**Figure 5 - 81mm Training, M68**



**Figure 6 - UK 81mm HE, L15**



**Figure 7 - US soldiers in Australia during WWII give a demonstration of mortar firing (AWM ID 012390)**



**Figure 8 - Australian soldiers from 6 RAR firing the 81mm mortar - Vietnam, 1966 (Photographer - Cunneen, William James. AWM ID CUN/66/0569/VN, Image copyright: © Australian War Memorial licensed under CC BY-NC)**



**Figure 9 - Unexploded 81mm HE mortar bomb found at Cashmere in SE QLD**



**Figure 10 - Unexploded 81mm M370 Smk-WP**