



## 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**

### SMOKE GRENADES (HAND)

#### Description

- ☛ Smoke grenades are a canister-type grenade used primarily for signalling purposes, marking a location (e.g. target or landing zone), to hide the movement of soldiers or police during conflict situations and even for fireworks displays and paintball games. Other types of smoke grenades (e.g. smoke grenades projected by grenade launchers) as well as other types of canister-types grenades (e.g. chemical, riot control and incendiary) have been used but are not described in this sheet.
- ☛ A wide variety of UK-, US- and Australian-made smoke hand grenades have been used in Australia from WWI to the present day by Australian, US and other military forces as well as government agencies (e.g. Police) and commercial companies. Some of the common types include the following:
  - **UK No. 77, 79, 80 & 83** – The No. 77 was used during WWII by Australian forces. Mk I contained White Phosphorus (WP) and Mk II contained Titanium Tetrachloride (FM). The No. 79 was also used during WWII and contained a smoke composition (PN 317, PN 411 or PN 83M). The No. 80 was a later version of the White Phosphorus (WP) grenade; the No. 83 was a later version of the 'PN smoke' grenade used in Vietnam.
  - **US M8, M15, M16, M18, M34, M83 & AN-M4** - The M-8 (Hexachlorethane mixture/HC), M-15 (bursting White Phosphorus/WP), M-16 (WP), M-18 (coloured smoke mixture), M-34 (WP) and M-83 (Terephthalic Acid/TA) were used by Australian and US forces (including Navy) from WWII until recent times.
  - **Australian 'Ascend' A100 & A200 Series** – these are Australian-made coloured smoke grenades in current use by Australian forces.
- ☛ Both unexpended and expended smoke grenades are one of the more common munitions items found in many locations around Australia – including many kept in homes. A number of incidents have occurred with these munitions including occasional fire injury/damage, smoke inhalation as well as disruptions to work or other activities.

#### Technical Data

- ☛ **Length** : Varies depending on type – approx. 100-175 mm (roughly drink can sized)
- ☛ **Diameter** : Varies depending on type – approx 40-70 mm
- ☛ **Weight** : Varies depending on type – approx 400-900 g
- ☛ **Fuse/Burster** : All contain a fuze; some include an explosive burster charge.
- ☛ **Filling** : Various types (as described earlier) ranging from approx 225 g to 540 g.
- ☛ **Identification** :
  - The body is typically sheet or rolled steel/metal. Most are green or olive drab however some use other colours (e.g. the M15 & M34 may be grey).
  - Various coloured bands may be visible (red, yellow, blue); the top of the M18 was usually coloured the same as the smoke colour (red, green, yellow, and violet).
  - Other colours may have been used or colours 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 - UK - No. 77 & No. 79 smoke grenades



Figure 2 - No. 80 smoke grenade



Figure 3 - No 83 smoke grenade

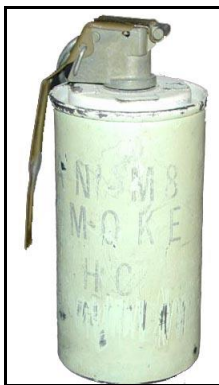


Figure 4 - M-8



Figure 5 - M-15

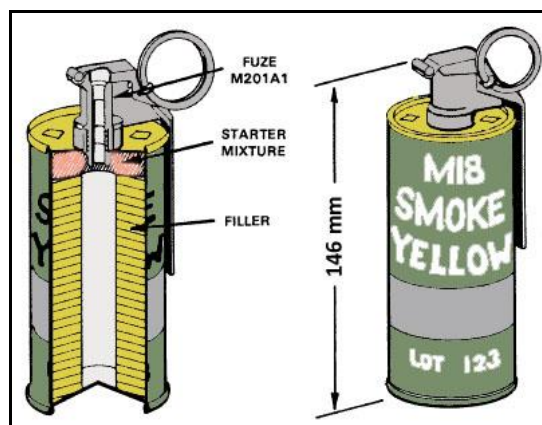


Figure 6 - M-18



Figure 7 - M-34



Figure 8 - Ascend A100 series Coloured Smoke Grenade



Figure 9 - Ascend A200 series Compact Coloured Smoke Grenade



Figure 10 - Commander 7 Aust Division watches the burst from a No. 77 WP Mk I hand grenade - Kairi, Nth Qld, 1944 (AWM ID number 083908)



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### SIGNAL FLARES (HAND-FIRED/RIFLE-PROJECTED)

#### Description

- Hand-held and rifle-projected signal flares are a pyrotechnic that produce a brilliant light (without an explosion) and are typically used for signalling or illumination. They have been widely used by both military forces and civilians in Australia for well over 100 years. Modern hand-held flares are typically projected into the air by a small explosive charge and can rise to a height of 180 to 250m. Many other types of flares (e.g. ground trip-flares used by soldiers and defensive flares deployed by aircraft) have been employed in Australia but are not described in this sheet.
- A wide variety of UK, US and Australian hand-held flares have been used in Australia from WWI to the present day by various military forces as well as government agencies (e.g. Police), commercial companies and individuals. Some of the common types include the following:
  - **Pre-WWII UK Signal Flares** – c. WWI until approx. 1920; made of tinned plate case and fired from a flare gun or a special adapter cup for rifles.
  - **WWII UK Signal Flares** – Usually one or more coloured or white stars; often parachute-suspended flares or ‘*star-bursts*’ comprising a rolled paper cylinder and fired from a 2½ inch rifle discharger ‘cup’ using ballistite cartridges. Other variants included hand-fired signal rockets that rose to some 300m before bursting (e.g. Signal Rockets, ½ lb and 1 lb).
  - **WWII & Later US Signal Flares** - Usually one or more coloured or white stars; often parachute-suspended flares or ‘*5 star cluster*’ types. Typically rifle-projected, fired by pyrotechnic pistols or hand-held/fired. Hand-held/fired variants have been widely used by Australian forces after WWII, during Korean and Vietnam Wars until recent times.
  - **Distress Signals/Flares** – a wide variety of hand-held/fired flares have been used by various nations training in Australia as well as the Australian Navy, Army and Air Force.
- Used throughout Australia by military forces involved in training or manoeuvres. May also be found washed ashore on beaches.

#### Technical Data

- Length : Varies depending on type – approx. 200-300 mm
- Diameter : Varies depending on type – approx 30-60 mm
- Weight : Varies depending on type – approx 300-600 grams
- Fuse/Burster : Typically contain a fuze and explosive propelling charge.
- Filling : Various explosive charges and pyrotechnic fillings.
- Identification :
  - The body is typically a cylindrical canister of metal, cardboard or plastic (red, white or silver).
  - Various coloured bands or lettering may be visible (red, yellow, blue); colours often designate the colour of the signal (green, red, amber, white).
  - Other colours may have been used or colours may have faded over time. It can be difficult to distinguish between dangerous and safe items - **treat all found munitions as dangerous.**



## Images

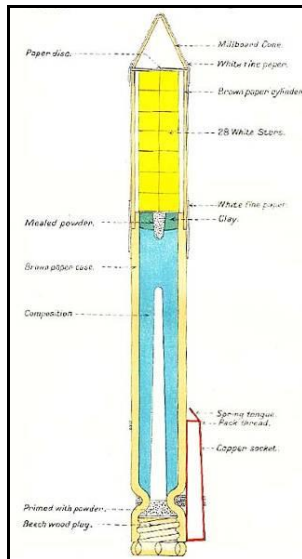


Figure 1 – UK Signal Rocket, 1 lb

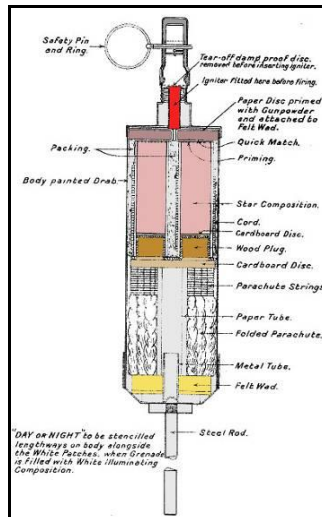


Figure 2 - Pre-WWII UK rifle-projected signal grenade No 32, Mk III



Figure 3 - Signal carrier found in the field

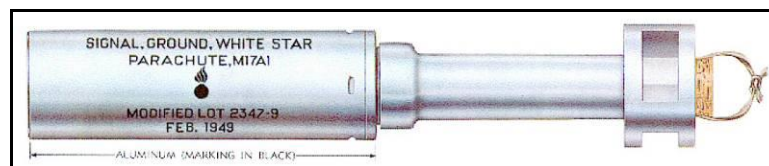


Figure 4 - Typical US rifle-projected signal flare

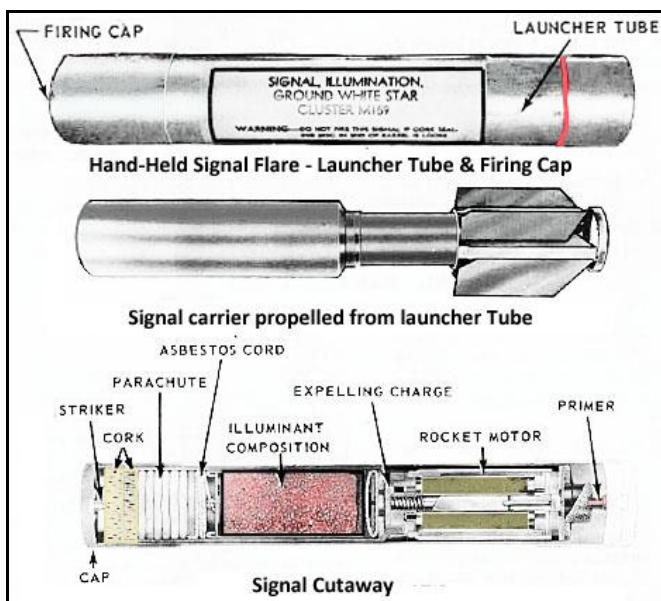


Figure 5 - Typical US/Australian hand-held/fired signal flare



Figure 6 - - US M185 distress/signal flare kit



Figure 7 - - Military personnel using hand-held distress/signal flare (M185)