



# 155MM MODULAR ARTILLERY CHARGE SYSTEM (MACS)



The Modular Artillery Charge System (MACS) consists of two propelling charges, the M231 and the M232/M232A1, and associated packaging. The system is compatible with all current and planned 155mm field artillery weapons. MACS uses a “build-a-charge” concept in which increments are identical to all others in the same lot designation, eliminating the need to dispose of unused increments. Unused increments are retained for future use. The M231 is fired either singly (Charge-1L) or in pairs (Charge-2L) to engage targets from 3 to 11 kilometers. The M232/M232A1 is fired in groups of 3 (Charge-3H), or groups of 4 (Charge-4H) or groups of 5 (Charge-5H) to engage targets from 7 to 30 kilometers.

The M231 and M232/M232A1 are bi-directional and can be loaded either end first.

*The igniter and propellant are enclosed in a rigid combustible case.*

The M232/M232A1 includes additives to reduce gun barrel wear and coppering.

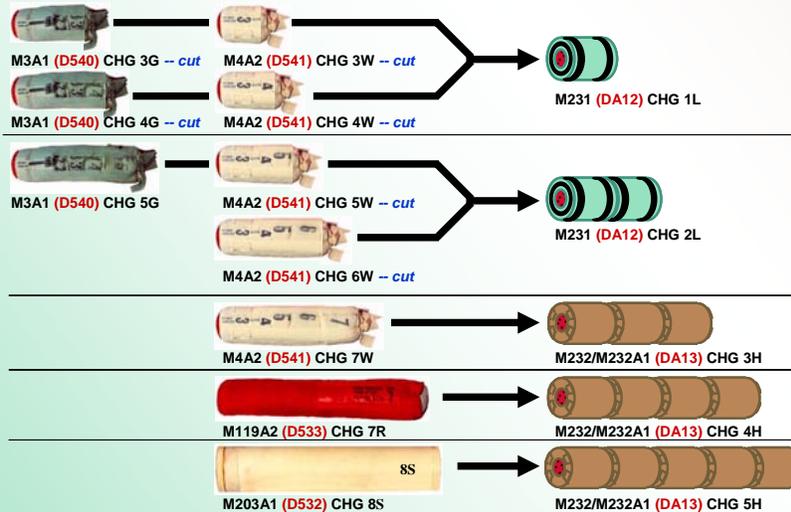
*Increments are packed in plastic sleeves allowing quick removal.*



M231s are green and M232 / M232A1s are light brown (tan).

*To facilitate night operations and preclude mixing of M231 and M232/M232A1 increments, M231 increments have smooth surfaces, while the M232/M232A1 increments have four bumps on each end.*

Each M231 increment weighs 4.25 pounds and is 6.05 inches in length. Each M232/M232A1 increment weighs 5.85 pounds and is 6.14 inches in length.



The MACS packaging system is designed to facilitate handling and support long-term storage. Canisters have quick opening lids for faster access times. All M231 canisters are green in color and have a solid lid handle. All M232/M232A1 canisters are tan in color and have a hole in the lid handle for tactile identification during night operations.