

155 mm M4A2 Propelling Charge

Use:

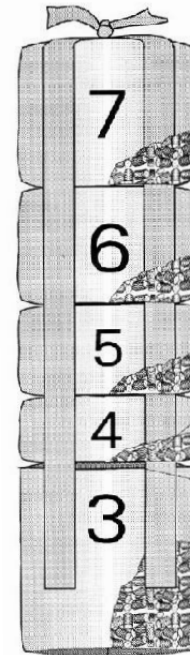
The M4A2 (white bag) Propelling Charge is a separate loading charge used in 155mm howitzers for firing in Zones 3, 4, 5, 6, and 7.

Description:

The full M4A2 Propelling Charge consists of 13.4 lbs (6 kg), of M1 propellant and is divided between a base charge and four unequal increments loaded in white cloth bags. The increments are connected by four cloth tapes sewn to the base and tied on top of increment. The igniter contains clean burning igniter (CBI) in a red cloth pad sewn to the bottom of the base charge. A flash reducer pad containing potassium sulfate or potassium nitrate is installed at the front end of the base pad (Increment 3). The seams in the base pad are inverted so that the edges of the cloth are inward to reduce residue after firing.

Functioning:

The igniter charge is ignited from the percussion primer and the igniter charge ignites the propelling charge. The burning propellant generates rapidly expanding gases to propel the projectile through the barrel and to the velocity required to reach the target. The flash reducer serves to limit the likelihood of blast overpressure and the visible flash at the muzzle.



Components:

Propelling charge increments:

- The igniter increment contains 3.5 oz. (100 gm) of CBI igniter powder
- The flash reducer pad assembled forward of the base charge contains 1 oz. (30 gm) of potassium nitrate or potassium sulphate.
- The weight of propelling charge assembly is 14lbs. (6.4 kg)

Increment No.	Propelling Composition	Web size (in) approx.	Weight (lbs) approx.
3	M1, SP	0.33	4.0
4	M1, SP	0.33	1.2
5	M1, SP	0.33	1.7
6	M1, SP	0.33	2.8
7	M1, SP	0.33	3.4

SP – Single-perforated, MP – Multi-perforated.

Technical data:			
Temperature Limits	Firing	Lower limit	-40 °F (-40 °C)
		Upper limit	+125 °F (+51 °C)
	Storage	Lower limit	-80 °F (-62 °C) (for periods not more than 3 days)
		Upper limit	+140 °F (+60 °C) (for periods not more than 4 hrs/day)
Packing	One (1) M4A2 propelling charge is packed in one (1) metal container. Twenty eight (28) metal containers M13A2 packed in one (1) wooden palette.		



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