



122 mm (Reduced Charge - Full Charge)



General

Reduced charge:

Single base seven perforated propellant cylindrical grain, category 9/7 is a kind of single base propellant containing Nitrocellulose (NC) and Diphenylamine (DPA). This propellant plus increments of one perforated granular propellant type 4/1, and type 3/1 as flash reducer is used as a reduced charge for 122mm Howitzer.

Full Charge:

Single base seven perforated propellant cylindrical grain, category 12/7 is a kind of single base propellant containing Nitrocellulose (NC) and Diphenylamine (DPA). This propellant plus two increments (a) one perforated tubular propellant type 12/1 - 27, (b) granular propellant type 3/1 as flash reducer is used as a full charge for 122mm Howitzer.



TECHNICAL SPECIFICATIONS

	Reduced charge			Full Charge		
	9/7	4/1	3/1	12/7	12/1 - 27	3/1
Type of propellant	9/7	4/1	3/1	12/7	12/1 - 27	3/1
Length(mm)	11.5 - 12.6	5.5 - 7.5	1.6 - 2.1	13.5 - 15.6	258 - 270	1.6 - 2.1
Hole diameter (mm)	0.4 - 0.6	0.25 - 0.35	0.1 - 0.25	0.5 - 0.7	2.4 - 2.8	0.1 - 0.25
Web thickness(mm)	0.95 - 1.10	0.4 - 0.55	0.28 - 0.36	1.15 - 1.25	1.1 - 1.25	0.28 - 0.36
Total volatiles (%)	≤ 4.5	≤ 3.8	≤ 3.7	≤ 4.8	≤ 4.5	≤ 3.7
External moisture (%)	1.0 - 1.8	1.0 - 1.8	1.0 - 1.8	1.0 - 1.8	1.0 - 1.8	1.0 - 1.8
Residual solvent (%)	≥ 0.9	≥ 0.6	≥ 0.5	≥ 1.0	≥ 1.2	≥ 0.5
Stability at 134.5 °C	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40

BALLISTIC SPECIFICATIONS

	Reduced charge			Full Charge		
	9/7	4/1	3/1	12/7	12/1 - 27	3/1
Type of propellant	9/7	4/1	3/1	12/7	12/1 - 27	3/1
Weight of charge(gr)	~ 1885	600	20	~ 3700	200	75
Average muzzle velocity(m/s)	565 ± 5 (charge No.0)			690 ± 5		
Average max pressure 15 °C (bar)	2300			2750		
Std. dev. of Velocity (m/s)	≤ 2			≤ 2		