



General

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 tubular type 8/1-41 is used as a reduced charge for 152mm howitzer type D -20.



TECHNICAL SPECIFICATIONS			
Type of propellant	9/7	4/1	8/1
Length (mm)	11.5 - 12.6	5.5 -7.5	395 -410
Hole diameter (mm)	0.4 - 0.6	0.25 -0.35	2.7 -3.0
Web thickness (mm)	0.95 -1.10	0.4 -0.55	0.70-0.85
Total volatiles (%)	≤ 4.5	≤ 3.8	≤ 3.5
External moisture (%)	1.0 -1.8	1.0 -1.8	1.0 -1.8
Residual solvent (%)	≥ 0.9	≥ 0.6	≥ 0.9
Stability at 134.5 °C	≥ 40	≥ 40	≥ 40

BALLISTIC SPECIFICATIONS					
Charge No.	No.2	No.3	No.4	No.5	No.6
Charge weight (approx.)for propellant type 9/7 (g)	2650	1590	1060	530	0
Charge weight for propellant type 8/1-41 (g)	100	100	100	100	100
Charge weight for propellant type 4/1 (g)	1175	1175	1175	1175	1175
Average muzzle velocity at 15°C(m/s)	511 ± 5	427	380	335	282
Average bore pressure at 15°C (kgf/cm ²)	≤ 2300	-	-	-	-
Std. dev. of Velocity (m/s)	≤ 2	-	-	-	-