



130 mm (Full Charge)



General

Double base one perforated propellant Tubular grain, category SF3-23/1-37 is a kind of double base propellant containing Nitrocellulose (NC), Nitroglycerine (NG), Dinitrotuloene (DNT), Dibutyl Phthalate (DBP), Centralite and wax.

These propellants are used in full propelling charges for 130mm gun type59 or M46.



TECHNICAL SPECIFICATIONS

Length	370 ₋₈ mm
Hole diameter	2.3-2.6 mm
Web thickness	2.2-2.35 mm
Moisture	≤ 0.7 %
Heat of Explosion	765 ± 10 cal/gr
Stability at 120 °C	≥ 40 min.

BALLISTIC SPECIFICATIONS

Total charge	~12900 gr
Muzzle Velocity	930 ± 8 m/s
Average Pressure at 15°C	≤ 3200 kgf/cm ²
Std. Dev. of Velocity (m/s)	≤ 2.3 m/s

152 mm (Full Charge)

General

Double base one perforated propellant Tubular grain, category SF3-16/1-17.5 and SF3-16/1-29 is a kind of double base propellant containing Nitrocellulose (NC), Nitroglycerine (NG), Dinitrotuloene (DNT), Dibutyl Phthalate (DBP), Centralite and wax.

These propellants are used as full propelling charges for 152mm howitzer type D20.



TECHNICAL SPECIFICATIONS

Type of propellant	SF3-16/1-17.5	SF3-16/1-29
Length (mm)	175-5	290-8
Hole diameter (mm)	1.3-1.6	1.3-1.6
Web thickness (mm)	1.65-1.75	1.63-1.75
Moisture (%)	≤ 0.7	≤ 0.7
Heat of Explosion (cal/gr)	765 ± 10	765 ± 10
Stability at 120 °C	≥ 40	≥ 40
Heat of explosion (cal/g)	765 ± 10	765 ± 10
Stability at 134.5 °C (min.)	≥ 40	≥ 40

BALLISTIC SPECIFICATIONS

Total charge (approx.)	8150 gr
Muzzle Velocity	655 m/s
Average Pressure at 15°C	≤ 2350 kgf/cm ²
Std. Dev. of Velocity (m/s)	2 m/s