



# TNT

KNOW-HOW ENGINEERING • PRODUCTION OF HIGH EXPLOSIVES • DELABORATION OF AMMUNITION



Prva iskra – namenska proizvodnja a.d. is producing all kinds of high explosives whose quality is in line with world standards in this area, GOST, MIL and STANAG, or according to customer's special requests. TNT has a high degree of stability and, compared to most other explosives, is almost completely resistant to impact and friction. TNT is widely used, especially in military industry. Most often it is used in the production of artillery munitions, anti-personnel and anti-tank mines, air grenades, hand grenades and other kinds of explosive mines, but also in the production of industrial explosives and detonators.

## PRODUCT DESCRIPTION

- Chemical name: 2,4,6-Trinitrotoluene
- Synonyms: TNT, Trinitrotoluene, Trotyl
- Chemical formula:  $C_7H_5N_3O_6$
- CAS number: 118-96-7
- UN PSN: UN 0209 TNT 1.1D



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TNT is by far the most important explosive for blasting charges of all weapons. Either alone or mixed in given proportions with other high explosives such as HMX to form octol, RDX to form hexotol, hexogen and aluminum to form hexotonal, PETN to form pentolite, etc. A mixture of TNT and HNS, known as TNT/HNS, improves the fine crystalline phase and prevents from the formation of cracks. TNT/HNS is used in tank and artillery munitions, shaped charges, bombs, etc.

## CHARACTERISTICS

Crystal Density, $g/cm^3$ :	1.654
Detonation Velocity, m/s:	6.900
Oxygen Balance, % (m/m):	-73.9
Heat of Explosion, kJ/kg:	4.519
Impact Sensitivity, N/m:	15.0
Friction Sensitivity, N:	353

## TECHNICAL SPECIFICATION

Solidification Point, °C, min:	80.20
Content of Moisture, % (m/m), max:	0.10
Insoluble Matters in Benzene, % (m/m), max:	0.05
Acidity (as sulphuric acid – $H_2SO_4$ ), % (m/m), max:	0.01
Alkalinity, % (m/m):	Not allowed
Tetranitromethane:	Not allowed
Nitrates (Nitric Acid):	Not allowed

## TNT/HNS

Color and appearance	pale yellow to dark brown flake, without mechanical impurities
TNT content % (m/m)	+0,7 / 98,9 / -1,7
HNS content % (m/m)	+1,5 / 0,5 / -0,3
Addition agent content % (m/m)	+0,2 / 0,6 / -0,4
Exudation test	without exudation in progress 7 day on 70 °C
Moisture content % (m/m), max.	0,1
Content volatile oxidize matter	Must content test relative to examination



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