



# TNT

## Explosives



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
- CAS number: 118-96-7
- UN PSN: UN 0209TNT 1.1 D



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 <sup>3</sup> :	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 <sub>2</sub> SO <sub>4</sub> ), % (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