



PETN

Explosives



PETN is an explosive that is extremely sensitive to impact and friction. Pure PETN is used for manufacturing detonators and detonating cords, as well as plastic explosives. Pharmaceutically pure PETN combined with lactose has its application in pharmaceutical industry.

PRODUCT DESCRIPTION :

- Chemical name: 2,2-Bis(hydroxymethyl)propane-1,3-diol tetranitrate
- Synonyms: PETN, Penthrate, T3H, Nitropenta, Pentaerythrityl tetranitrate
- Chemical formula: $C_5H_8N_4O_{12}$
- CAS number: : 78-11-5
- UN PSN: UN 0150 PETN, WETTED 1.1D



The most common use of PETN is as an explosive with high brisance. It is used in the manufacture of detonating fuse, detonators and plastic explosives. If phlegmatized with a small amount of wax and pressed, it may be used to produce boosters and fillings for smaller caliber projectiles. PETN can also be incorporated into gelatinous, industrial explosives.

CHARACTERISTICS :

• Crystal Density, g/cm ³ :	1.780
• Detonation Velocity, m/s:	8.370
• Oxygen Balance, % (m/m):	-10.1
• Heat of Explosion, kJ/kg:	6.318
• Impact Sensitivity, N/m:	3.0
• Friction Sensitivity, N:	60

TECHNICAL SPECIFICATION :

• Melting Point, °C, min:	140
• Insoluble in Acetone, % (m/m), max:	0.10
• Sandy Materials:	not allowed
• Content of Ash, % (m/m), max:	0.10
• Acidity / Alkalinity, % (m/m), max:	0.01
• Bulk Density, g/cm ³ , min:	700
• Stability - Abel 80 °C, min	60 minutes

COMPOSITIONS BASED ON PETN :

Product	Ingredients	Content, % (m/m)
• Pentolite 50/50	PETN/TNT	50/50
• Pentolite 90/10	PETN/TNT	90/10
• PETN/Wax	PETN/Wax	95/5
• PETN 1+5	PETN / Lactose / Conservans	