



# PETN

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. 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, Penthrite, ТЭН, Nitropenta, Pentaerithryltetranitrat
- Chemical formula: C<sub>5</sub>H<sub>8</sub>N<sub>4</sub>O<sub>12</sub>
- CAS number: 78-11-5
- UN PSN: UN 0150 PETN, WETTED 1.1D



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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 <sup>3</sup> :	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 <sup>3</sup> , 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	



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