Product Data Sheet
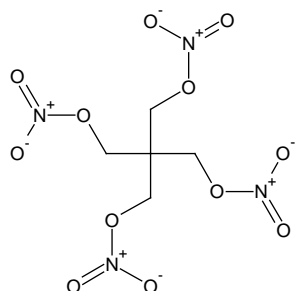
Pentaerythritol Tetranitrate (PETN)

Description
PETN is a white or almost white crystalline powder with no particular odour.

Chemical formula: $C_5H_8N_4O_{12}$

Chemical structure:

Molecular weight: 316.14

CAS No: 78-11-5

EINECS: 201-084-3

Chemical name:
2,2-Bis(hydroxymethyl)propane-1,3-diol tetranitrate

Synonyms:
PETN, Penthrite, Pentrit, Nitropenta

Specifications

Appearance	white to off-white crystalline powder
Melting point	$141.0 \pm 1.0°C$
Abel test (80°C)	>60 minutes
Acidity/alkalinity	<0.01%
Insoluble in acetone	<0.10%
Ashes	<0.10%

Granulation

SSE Standard
(recommended for cord ≥ 10 g/m)

0.80 mm sieve	< 2 %	remaining
0.16 mm sieve	> 90 %	remaining

SSE class 2

US nr 100 sieve	< 4 % remaining
US nr 200 sieve	20-35 % remaining

SSE class 4
(recommended for cord < 10 g/m)

0.60 mm sieve	< 2 % remaining
0.16 mm sieve	> 80 % remaining

Other properties
Solubility	insoluble in water soluble in acetone

High explosive, sensitive to impact, friction and fire.

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Stability   min. 5 years

Transport classification:
UN N° 0150
RID/ADR: 1.1D
IMDG: 1.1D
IATA/ICAO: forbidden

Toxicity
PETN when ingested acts as a blood pressure dropping agent

Safety
Avoid inhalation of dust or direct contact with eyes or skin by applying suitable protective measures and personal hygiene.
For full safety information and necessary precautions, please refer to the respective Safety Data Sheet.
Local regulations concerning hazardous materials should be observed.
The information given in this document is based on our current knowledge and experience, and may be used at your discretion and risk. It does not relieve you from carrying out your own precautions and tests. We do not assume any liability in connection with your product or its use. You must comply with all applicable laws and regulations, and observe all third party rights.

Applications
For miscellaneous uses in the explosive industry.