



MATERIAL SAFETY DATA SHEET
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MSDS# 1120

DATE: 08/01/03

Supersedes MSDS
EBCo ENSI002

SECTION I

Chemical Name and Synonyms:

Pentaerythritol Tetranitrate

Trade Name and Synonyms:

PETN

SECTION II - HAZARDOUS INGREDIENTS

Ingredient:

Pentaerythritol Tetranitrate
(PETN)

C.A.S. No.

78-11-5

OSHA PEL

None Established

ACGIH TLV

None Established

SECTION III - PHYSICAL DATA

Boiling Point:

N/A

Specific Gravity:

N/A

Vapor Pressure:

N/A

Percent Volatile:

N/A

Vapor Density:

N/A

Evaporation Rate:

N/A

Solubility in Water:

PETN: Insoluble
(Soluble In Acetone)

Melting Point:

PETN: 140° C

Appearance and Odor:

PETN: Odorless White Crystalline Solid.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point:

N/A

Exposure Limits:

LEL: N/A

UEL: N/A

Special Fire Fighting Procedures:

DO NOT FIGHT FIRES INVOLVING EXPLOSIVES. ISOLATE THE AREA. EVACUATE PERSONNEL TO A SAFE PLACE. EXPLOSIVE DETONATION CAN OCCUR.

Extinguishing Media:

Do not fight fires involving explosives. Water may be applied through a fixed extinguishing system (sprinklers) as long as people need not be present for the system to operate.

Unusual Fire and Explosion Hazards:

May detonate if exposed to shock, heat, impact, sparks or friction. PETN explodes at 215° C. Nitrogen oxides are released when the product is burned or detonates.

Auto Ignition Temperature:

PETN: 190° C

SECTION V - ROUTES OF ENTRY EFFECTS OF OVEREXPOSURE

Eye Contact:

PETN may result in eye irritation. Flush immediately with running water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact:

Wash thoroughly with soap and water if skin irritation occurs; seek medical attention.

Inhalation:

PETN can lower blood pressure. PETN is a vasodilator. If detonation fumes are inhaled remove victim to fresh air. If not breathing, give artificial respiration; seek medical attention.

Ingestion:

Human systemic effects by ingestion, dermatitis. Effects are similar to nitroglycerin, i.e., headache, weakness, and fall in blood pressure. Seek medical attention.

SECTION VI-EMERGENCY FIRST AID PROCEDURES

<u>Eye Contact:</u>	Flush using running water for 15 minutes. If irritation persists, seek medical attention.
<u>Skin Contact:</u>	Wash thoroughly with soap and water. If skin irritation occurs, seek medical attention.
<u>Inhalation:</u>	Remove victim to fresh air. If not breathing administer artificial respiration. Seek medical attention.
<u>Ingestion:</u>	Seek medical attention.

SECTION VII- REACTIVITY DATA

<u>Stability:</u>	Stable, but accidental detonation can occur.
<u>Conditions To Avoid:</u>	PETN may detonate if exposed to sufficient heat, shock, friction, impact and static charge.
<u>Incompatibility:</u>	Incompatible with acids, alkalis.
<u>Hazardous Decomposition Products:</u>	Detonation and burning will produce nitrogen oxides. Avoid breathing the fumes from detonation and burning.
<u>Hazardous Polymerization:</u>	Will not occur.

SECTION VIII - SPILLS OR LEAK PROCEDURES

<u>Steps To Be Taken In Case Material is Released or Spilled:</u>	<p>Review Fire and Explosive Hazards and Safety Precautions before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up. Isolate the spill area; removing all sources of ignition from the location. Carefully collect the spilled material and place in a (Velostat) conductive bag. Contamination of this material with sand, grit or dirt will render the material more sensitive to detonation. If safe; separate material that is not contaminated from contaminated material. "Loose" powder spills should be wetted down and cleaned using a damp rag or sponge. Store all collected material in a secure area, to await proper disposal.</p> <p>Only qualified personnel should perform any clean-up and disposal of material.</p>
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Waste Disposal Method: Waste PETN is classified as a hazardous waste with the characteristic of reactivity. EPA Hazardous Waste Number D003. Any such waste should be handled in accordance with local, state and federal regulations. The current-preferred methods of destruction of such waste are open burning or open detonation. All destruction is to be performed by qualified personnel at a licensed (TSD).

SECTION IX - SPECIAL PROTECTION INFORMATION

Respiratory Protection: OSHA/NIOSH approved dust, mist and fume filter respirator.

Ventilation: Mechanical ventilation is generally not recommended for control of "Secondary" high explosives that is unreacted due to the possible accumulation of sensitive explosive in the ventilation system.

Ventilation should be provided for products manufactured with PETN Powder if used in underground mines or if any special product testing is to be performed indoor for the control of nitrogen oxides.

Protective Gloves: Protective gloves of rubber or Neoprene should be worn.

Eye Protection: Safety glasses

Other Protection: N/A

SECTION X - OTHER PRECAUTIONS

Precautions To Be Taken In Handling and Storage: Transportation and storage must be in accordance with local, state and federal regulations. Store away from sparks or other ignition sources. Avoid heat, shock and impact.

Other Precautions: Refer to Manufacturer's Instructions and Warnings supplied with product.

SARA 313 Information: This product does not contain any chemical that is subject to the reporting requirements of SARA Title III; Section 313.

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