



PHOSPHORUS PENTASULFIDE

UN 1340

Shipping Name: Phosphorus pentasulfide
Other Names: Diphosphorus pentasulfide
Phosphoric sulfide
Phosphorus persulfide

Sulfur phosphide
Thiophosphoric anhydride



WARNING! • DO NOT USE WATER! REACTS WITH WATER TO FORM PHOSPHORIC ACID AND HIGHLY TOXIC HYDROGEN SULFIDE!
• MATERIAL MAY PRODUCE HEAT AND SPONTANEOUSLY IGNITE IN THE PRESENCE OF MOISTURE!

Hazards:

- Vapors are heavier than air and will collect and stay in low areas
- Odor is not a reliable indicator of the presence of toxic amounts of vapor
- Container may explode when exposed to fire
- Combustion products include the toxic sulfur oxide, phosphorous pentoxide, hydrogen sulfide gases and phosphoric acid
- Interferes with the body's ability to use oxygen

Awareness and Operational Level Training Response:

- Do not put yourself in danger by entering a contaminated area to rescue a victim
- Stay upwind and uphill
- Determine the extent of the problem
- If in a confined area STAY OUT - toxic hydrogen sulfide may be released
- Isolate the area of release or fire and deny entry
- Evacuate or shelter in place the immediate area and downwind for a large release
- Notify local health and fire officials and pollution control agencies
- If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated water

Description:

- Greenish-yellow, greenish-gray or grayish-yellow solid
- Rotten egg-like odor
- Sinks in water and reacts with water to form toxic hydrogen sulfide and phosphoric acid
- Flammable
- Vapors are heavier than air and will collect and stay in low areas

Operational Level Training Response:

RELEASE, NO FIRE:

- Cover material to protect from wind, rain or spray
- Prevent contaminated runoff from entering sewers and waterways if it can be done safely well ahead of the release
- Ventilate confined area if it can be done without placing personnel at risk

FIRE:

- DO NOT allow water to come in contact with the material
- If material is on fire and conditions permit, DO NOT EXTINGUISH - fight fire with carbon dioxide or dry chemical if available in sufficient amounts
- If material is not leaking, cool exposed containers with large quantities of water from unattended equipment or remove intact containers if it can be done safely
- If cooling streams are ineffective (unvented container distorts, bulges or shows any other sign of expanding), withdraw immediately to a secure location

First Aid:

- Do not put yourself in danger by entering a contaminated area to rescue a victim
- Provide Basic Life Support/CPR as needed
- Decontaminate the victim as follows:
 - ◆ Inhalation - remove the victim to fresh air and give oxygen if available
 - ◆ Skin - remove and isolate contaminated clothing (including shoes) and wash skin with soap and large volumes of water for 15 minutes
 - ◆ Eye - rinse eyes with large volumes of water or saline for 15 minutes
 - ◆ Swallowed - do not make the victim vomit
- Seek medical attention
- Toxic effects may be delayed
- Note to physician: can cause sulfhemoglobinemia; if symptoms indicate, amyl nitrate is the initial antidote

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