

# VAPORPH<sub>3</sub>OS<sup>®</sup> Technical

**FOR MANUFACTURING, FORMULATING OR REPACKAGING**

**READ THE LABEL BEFORE USING**

GUARANTEE: By Weight  
Phosphine Gas (PH<sub>3</sub>).....99.3%

REGISTRATION NO: 27683  
PEST CONTROL PRODUCTS ACT

**DANGER**



**POISON**



**EXTREMELY FLAMMABLE**

**LIQUID IS CORROSIVE TO EYES AND SKIN**

**KEEP OUT OF REACH OF UNAUTHORIZED PERSONNEL**

Net Contents:  
49 L

CYTEC CANADA INC.  
9061 Garner Road  
Niagara Falls, Ontario, Canada,  
L2E 6T4

Emergency Phone: Canada (905)356-8310 US 1-800/424-9300 or 703/527-3887

### DIRECTIONS FOR USE:

This control product is to be used only in the manufacture of a pesticide registered under the *Pest Control Products Act*.

#### FIRST AID

Symptoms of exposure to phosphine gas can include headache, dizziness, nausea, difficult breathing, vomiting and diarrhea. In all cases of overexposure, protect yourself, remove the person from the source of exposure and get them to an Emergency department. If possible, bring the container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

#### FIRST AID RESPONDER PROTECTION

Phosphine gas is a highly toxic systemic poison and a severe respiratory tract irritant. First Aid responders should protect themselves through the use of an appropriate personal protective equipment before attempting to rescue or care for a person who has been exposed to phosphine gas, and/or if entering a zone with potentially unsafe phosphine levels. A NIOSH-approved self-contained breathing apparatus (SCBA) with a full face piece operated in a pressure-demand or other positive-pressure mode OR a NIOSH-approved air-line respirator with a full face piece operated in a pressure-demand or other positive-pressure mode combined with auxiliary self-contained positive-pressure breathing apparatus is recommended in response situations that involve exposure to potentially unsafe or unknown levels of phosphine (see PRECAUTIONS section for further guidance regarding personal protective equipment).

**If Inhaled:** Remove person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, using a bag-valve-mask device to prevent possible secondary exposure to phosphine gas to the first aid responder. Do not perform mouth-to-mouth resuscitation. Do not give anything by mouth to an unconscious person. Call a poison control centre or doctor for further treatment advice.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. May cause frostbite to unprotected skin upon contact with dispensing equipment while gas is discharging rapidly. Treat as thermal burn. Call a poison control centre or doctor for treatment advice.

**If in Eyes:** In case of freezing or cryogenic burns, hold eye open and rinse slowly and gently with plenty of COOL water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Do not rinse eyes with hot or even tepid water. Call a poison control centre or doctor for treatment advice.

#### PRECAUTIONS

**Contains Extremely Hazardous Gas. DANGER – POISON. KEEP OUT OF REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL. Fatal if inhaled. Do not inhale vapour. The liquid may cause burns. DO NOT get in eyes, on skin or on clothing. DO NOT eat, drink or smoke while handling VAPORPH<sub>3</sub>OS<sup>®</sup> Technical.** Use in well ventilated areas. Contains flammable and toxic phosphine (hydrogen phosphide) gas. Phosphine may deaden the sense of smell. Do not depend solely on the odour to detect VAPORPH<sub>3</sub>OS<sup>®</sup> Technical. Wear a loose fitting long sleeve shirt, long pants, socks, safety shoes, safety glasses, and wear gloves (leather or leather faced cotton gloves) when handling this product. For worker safety, appropriate respiratory protection must be worn as outlined below. If a beard or long sideburns interfere with the fit of respiratory protection, they must be shaven. For phosphine levels between 0.1 – 5 ppm, the minimum protection required is a NIOSH-approved air-purifying full face piece respirator (gas mask) with a chin-style, front- or back-mounted canister approved for phosphine OR a NIOSH-approved supplied-air respirator (i.e., air-line respirator or self-contained breathing apparatus) with a full face piece. For phosphine levels above 5 ppm or at unknown concentrations, a NIOSH-approved self-contained breathing apparatus (SCBA) with a full face piece operated in a pressure-demand or other positive-pressure mode OR a NIOSH-approved air-line respirator with a full face piece operated in a pressure-demand or other positive-pressure mode combined with an auxiliary self-contained positive-pressure breathing apparatus must be worn. For emergency use and/or to escape from conditions which are Immediately Dangerous to Life or Health (IDLH), keep available for use an adequate number of NIOSH-approved self-contained breathing apparatus (SCBA) with a full face-piece operated in a pressure-demand or other positive pressure mode.

#### TOXICOLOGICAL INFORMATION

##### **NOTE TO PHYSICIAN □ THIS IS PHOSPHINE, IT IS NOT PHOSGENE**

VAPORPH<sub>3</sub>OS<sup>®</sup> Technical is liquefied phosphine gas. Mild exposure by inhalation causes malaise (indefinite feeling of sickness), ringing of ears, fatigue, nausea and pressure in chest, which is relieved by removal to fresh air. Moderate poisoning causes weakness, vomiting, pain just above the stomach, chest pain, diarrhea and dyspnea (difficulty in breathing). Symptoms of severe poisoning may appear within a few hours to several day. Severe poisoning may result in pulmonary edema (fluid in lungs) and may lead to dizziness, cyanosis (blue or purple skin colour), unconsciousness and death.

In sufficient quantity, phosphine affects the liver, kidneys, lungs, nervous system, and circulatory system, and may result in (1) pulmonary edema, (2) liver elevated serum AST, ALT and ALP, reduced prothrombin, hemorrhage and jaundice (yellow skin colour) and (3) kidney hematuria (blood in urine) and anuria (abnormal or lack of urination). Pathology is characteristic of hypoxia (oxygen deficiency in body tissue). Frequent exposure to concentrations above permissible levels over a period of days or weeks may cause poisoning. Inhalation can cause lung edema (fluid in lungs) and hyperaemia (excess of blood in a body part), small perivascular brain hemorrhages and brain edema (fluid in brain). Treatment is symptomatic.

The following measures are suggested for use by the physician in accordance with the physician's own judgment:

1. Exposure of skin to rapidly evaporating liquid may cause cryogenic "burn." Treat the "burn" in a similar manner as a thermal burn.
2. In case of freezing or cryogenic "burns" to eyes by rapidly evaporating liquid, RINSE EYES WITH COOL WATER. Do not rinse eyes with hot or even tepid water.
3. In its milder to moderate forms symptoms of poisoning may take up to 24 hours to appear. Monitoring should continue for at least this long. Manifestations of severe poisoning appear early. Hypoxia and hypotension should be treated with usual supportive measures of oxygenation, intubation, ventilation and positive pressure as needed, and intravenous fluids, pressors and inotropes as required, respectively. There is no specific antidote. Hemodialysis may be indicated if renal failure develops but does not remove the toxin.

### **STORAGE INSTRUCTIONS**

The storage of poison gases in occupied spaces is prohibited. Indoor storage in a separate building with no other occupancy is suitable. The building should be of non-combustible construction, adequately ventilated and equipped with a continuous phosphine monitoring and alarm system that is activated at 0.1 ppm. In some jurisdictions, the indoor storage of toxic gases is prohibited.

### **DECONTAMINATION AND DISPOSAL**

Canadian formulators using this product should dispose of unwanted active ingredient and containers in accordance with municipal or provincial regulations. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill and for clean-up of spills.

### **SPILL AND LEAK PROCEDURES**

**GENERAL:** All releases can produce high levels of gas, and therefore, attending personnel must wear appropriate respiratory protection and personal protective equipment as specified below under EMERGENCY RESPONDER PROTECTION.

**IMPORTANT:** Emergency responders must be familiar with the "Emergency Response Guidebook", which is maintained by Transport Canada.

**WHAT TO DO:** In the event of an accidental release, evacuate the area immediately. A response into the leak area should only be attempted by trained emergency responders. If it is possible to shut off the source of the leak from a remote area, it should be done. Otherwise, evacuate the area and call for assistance. As a reference, small and large spills may require isolation distances between 60 – 400 metres and may also require protective distances between 200 metres and 4.1 kilometres (refer too "Emergency Response Guidebook").

CYTEC operates a 24-hour Emergency Response and Incident Management System (ERIM). For emergencies involving spill, leak, fire, exposure or accident call Canadian Transport Emergency Centre (CANUTEC) 613/996-6666 or CHEMTREC: 1-800/424-9300. Outside the US or Canada call 703/527-3887.

Emergency responders must follow the detailed specifications for phosphine (ID number 2199, Guide Number 119) in the "Emergency Response Guidebook", which is maintained by Transport Canada ([www.tc.gc.ca/eng/canutec/guide-menu-227.htm](http://www.tc.gc.ca/eng/canutec/guide-menu-227.htm)).

### **EMERGENCY RESPONDER PROTECTION:**

Wear a NIOSH-approved self-contained breathing apparatus (SCBA) with full face piece and operated in a pressure-demand or other positive-pressure mode OR a NIOSH-approved air-line respirator with a full face piece operated in a pressure-demand or other positive-pressure mode combined with an auxiliary self-contained positive-pressure breathing apparatus when the concentration of phosphine gas is unknown. If the concentration is known, other appropriate respiratory protection must be

2015-6440  
2016-05-19

worn as specified under PRECAUTIONS.

All emergency responses should be made wearing personal protective equipment as specified above including chemical-resistant gloves (neoprene, butyl rubber or PVC), a Seranex coated Tyvek suit and rubber boots. Note that the chemical protective clothing listed may provide little or no thermal protection. Structural firefighters' protective clothing provides limited protection in fire situation only; it is not effective in spill situations where direct contact with the chemical is possible.

**NOTICE TO USER:**

**This control product is to be used only in accordance with the directions on this label. It is an offence under the *Pest Control Products Act* to use a control product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.**