

1. Material Identification

Product Name : Mevinphos
Catalog Number : io-2690
CAS Number : 7786-34-7
Identified uses : Laboratory chemicals, manufacture of chemical compounds
Company : IonZ

>> R&D Use only

2. Hazards Identification

GHS Classification:

Flammable liquid (category 2)
 Acute toxicity, oral (Category 3)
 Acute toxicity, dermal (Category 3)
 Acute toxicity, inhalation (Category 3)
 Specific target organ toxicity, single exposure (Category 1)

Pictogram(s)



GHS Hazard Statements

- >> H300+H310 (80.9%): Fatal if swallowed or in contact with skin [Danger Acute toxicity, oral; acute toxicity, dermal]
- >> H300 (100%): Fatal if swallowed [Danger Acute toxicity, oral]
- >> H310 (100%): Fatal in contact with skin [Danger Acute toxicity, dermal]
- >> H330 (12.8%): Fatal if inhaled [Danger Acute toxicity, inhalation]
- >> H331 (80.9%): Toxic if inhaled [Danger Acute toxicity, inhalation]
- >> H400 (100%): Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard]
- >> H410 (100%): Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

Precautionary Statement Codes

- >> P260, P261, P262, P264, P270, P271, P273, P280, P284, P301+P316, P302+P352, P304+P340, P316, P320, P321, P330, P361+P364, P391, P403+P233, P405, and P501

Health Hazards:

- >> This material is super toxic; the probable oral lethal dose for humans is less than 5 mg/kg, or a taste (less than 7 drops) for a 150-lb. person. It has direct and immediate effects whether it is swallowed, inhaled, or absorbed through the skin. (EPA, 1998)
- >> Fire may produce irritating or poisonous gases. Runoff from fire control may give off poisonous gases and also cause pollution. When heated to decomposition, it emits toxic fumes of phosphorus oxides. Avoid strong oxidizers. Avoid temperatures above 77-86F, sources of heat, fire, free flames or spark-generating equipment. (EPA, 1998)

- >> Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.

3. Composition/Information On Ingredients

Chemical name : Mevinphos
CAS Number : 7786-34-7
Molecular Formula : C₇H₁₃O₆P
Molecular Weight : 224.1500 g/mol

4. First Aid Measures

First Aid:

- >> Warning: Effects may be delayed. Caution is advised. Vital signs should be monitored closely.
- >> Note: Mevinphos is a cholinesterase inhibitor.
- >> Signs and Symptoms of Mevinphos Exposure: Acute exposure to mevinphos may produce the following signs and symptoms: sweating, pinpoint pupils, blurred vision, headache, dizziness, profound weakness, muscle spasms, seizures, and coma. Mental confusion and psychosis may occur. Excessive salivation, nausea, vomiting, anorexia, diarrhea, and abdominal pain may also occur. The heart rate may decrease following oral exposure or increase following dermal exposure. Chest pain may be noted. Hypotension (low blood pressure) may be observed, although hypertension (high blood pressure) is not uncommon. Respiratory symptoms include dyspnea (shortness of breath), pulmonary edema, respiratory depression, and respiratory paralysis.
- >> Emergency Life-Support Procedures: Acute exposure to mevinphos may require decontamination and life support for the victims. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination. Air-purifying or supplied-air respiratory equipment should also be worn, as necessary. Rescue vehicles should carry supplies such as plastic sheeting and disposable plastic bags to assist in preventing spread of contamination.
- >> Inhalation Exposure:
 - >> 1. Move victims to fresh air. Emergency personnel should avoid self-exposure to mevinphos.
 - >> 2. Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support.
 - >> 3. Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.
 - >> 4. RUSH to a health care facility!
- >> Dermal/Eye Exposure:
 - >> 1. Remove victims from exposure. Emergency personnel should avoid self-exposure to mevinphos.
 - >> 3. Remove and isolate contaminated clothing as soon as possible.
 - >> 4. If eye exposure has occurred, eyes must be flushed with lukewarm water for at least 15 minutes.
 - >> 5. Wash exposed skin areas thoroughly with water.
 - >> 6. Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.
 - >> 7. RUSH to a health care facility!
- >> Ingestion Exposure:
 - >> 1. Evaluate vital signs including pulse and respiratory rate, and note any trauma. If no pulse is detected, provide CPR. If not breathing, provide artificial respiration. If breathing is labored, administer oxygen or other respiratory support.
 - >> 2. Obtain authorization and/or further instructions from the local hospital for administration of an antidote or performance of other invasive procedures.
 - >> 3. Vomiting may be induced with syrup of Ipecac. If elapsed time since ingestion of mevinphos is unknown or suspected to be greater than 30 minutes, do not induce vomiting and proceed to Step

- >> 4. Ipecac should not be administered to children under 6 months of age. Warning: Ingestion of mevinphos may result in sudden onset of seizures or loss of consciousness. Syrup of Ipecac should be administered only if victims are alert, have an active gag reflex, and show no signs of impending seizure or coma. If ANY uncertainty exists, proceed to Step
- >> 4. The following dosages of Ipecac are recommended: children up to 1 year old, 10 mL (1/3 oz); children 1 to 12 years old, 15 mL (1/2 oz); adults, 30 mL (1 oz). Ambulate (walk) the victims and give large quantities of water. If vomiting has not occurred after 15 minutes, Ipecac may be readministered. Continue to ambulate and give water to the victims. If vomiting has not occurred within 15 minutes after second administration of Ipecac, administer activated charcoal.
- >> 4. Activated charcoal may be administered if victims are conscious and alert. Use 15 to 30 g (1/2 to 1 oz) for children, 50 to 100 g (1-3/4 to 3-1/2 oz) for adults, with 125 to 250 mL (1/2 to 1 cup) of water.
- >> 5. Promote excretion by administering a saline cathartic or sorbitol to conscious and alert victims. Children require 15 to 30 g (1/2 to 1 oz) of cathartic; 50 to 100 g (1-3/4 to 3-1/2 oz) is recommended for adults.
- >> 6. RUSH to a health care facility! (EPA, 1998)

First Aid Measures

Inhalation First Aid

- >> Fresh air, rest. Refer immediately for medical attention.

Skin First Aid

- >> Remove contaminated clothes. Rinse and then wash skin with water and soap. Wear protective gloves when administering first aid. Refer immediately for medical attention.

Eye First Aid

- >> Rinse with plenty of water (remove contact lenses if easily possible).

Ingestion First Aid

- >> Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer immediately for medical attention.

5. Fire Fighting Measures

- >> Isolate hazard area, stay upwind; ventilate closed spaces before entering, wear protective clothing and positive breathing apparatus. Remove and isolate contaminated clothing.
- >> Small fires: use dry chemical, carbon dioxide, water spray or foam. Large fires: use water spray, fog or foam. Fight fire from maximum distance. Dike fire control water for later disposal. (EPA, 1998)
- >> Use powder, water spray, foam, carbon dioxide.

6. Accidental Release Measures

Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

- >> Excerpt from ERG Guide 152 [Substances – Toxic (Combustible)]:
- >> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.
- >> SPILL: Increase the immediate precautionary measure distance, in the downwind direction, as necessary.
- >> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

- >> Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

7. Handling And Storage

Safe Storage:

- >> Separated from food and feedstuffs and strong oxidants. Keep in a well-ventilated room. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.

Storage Conditions:

- >> Rooms used for storage only should be soundly constructed & fitted with secure locks. Floors should be kept clear & pesticides clearly identified. If repacking is carried out in storage rooms, adequate light should be available; floors should be impervious & sound /Pesticides/

8. Exposure Control/ Personal Protection

REL-TWA (Time Weighted Average)

- >> 0.01 ppm (0.1 mg/m³)

REL-STEL (Short Term Exposure Limit)

- >> 0.03 ppm (0.3 mg/m³)
- >> TWA 0.01 ppm (0.1 mg/m³) ST 0.03 ppm (0.3 mg/m³) [skin]
- >> 0.1 [mg/m³]

PEL-TWA (8-Hour Time Weighted Average)

- >> 0.1 mg/m³
- >> 0.01 [mg/m³], inhalable fraction and vapor
- >> 0.01 mg/m

TLV-TWA (Time Weighted Average)

- >> 0.01 mg/m³ (inhalable fraction and vapor) [1998]

MAK (Maximale Arbeitsplatz Konzentration)

- >> 0.093 mg/m

Inhalation Risk:

- >> A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 °C.

Effects of Short Term Exposure:

- >> Cholinesterase inhibition. The substance may cause effects on the nervous system. This may result in convulsions and respiratory failure. Exposure far above the OEL could cause death. The effects may be delayed. Medical observation is indicated.

Fire Prevention

- >> NO open flames.

Exposure Prevention

- >> STRICT HYGIENE! AVOID EXPOSURE OF ADOLESCENTS AND CHILDREN! IN ALL CASES CONSULT A DOCTOR!

Inhalation Prevention

- >> Use ventilation, local exhaust or breathing protection.

Skin Prevention

- >> Protective gloves. Protective clothing.

Eye Prevention

- >> Wear face shield or eye protection in combination with breathing protection.

Ingestion Prevention

>> Do not eat, drink, or smoke during work. Wash hands before eating.

Exposure Control and Personal Protection

Exposure Summary

>> Biological Exposure Indices (BEI) [ACGIH] – Acetylcholinesterase activity in red blood cells = 70% of individual's baseline; Butylcholinesterase activity in serum or plasma = 60% of individual's baseline; Sample at end of shift; [TLVs and BEIs]

Maximum Allowable Concentration (MAK)

>> 0.09 [mg/m3]

9. Physical And Chemical Properties

Molecular Weight:

>> 224.15

Exact Mass:

>> 224.04497513

Physical Description:

>> Mevinphos is a pale yellow to orange liquid, with a weak odor. Used as an insecticide and acaricide on vegetables, alfalfa, deciduous fruits and nuts. (EPA, 1998) May be found in the form of a dry mixture where the liquid is absorbed onto a dry carrier.

>> COLOURLESS-TO-YELLOW LIQUID.

Color/Form:

>> PALE YELLOW LIQUID

Odor:

>> Weak odor

Boiling Point:

>> 223 to 226 °F at 1 mmHg (EPA, 1998)

Melting Point:

>> 44.4 to 70 °F trans isomer / cis isomer (EPA, 1998)

>> 6.9 °C (trans), 21 °C (cis)

Flash Point:

>> 175 °F (EPA, 1998)

>> 175 °C o.c.

Solubility:

>> Miscible (NIOSH, 2024)

>> Solubility in water: miscible

Density:

>> 1.25 at 68 °F (EPA, 1998) – Denser than water; will sink

>> Relative density (water = 1): 1.25

Vapor Pressure:

>> 0.0029 mmHg at 70 °F (EPA, 1998)

>> Vapor pressure, Pa at 21 °C: 0.38

LogP:

>> log Kow = 0.13

>> 1.2

Stability/Shelf Life:

>> MODERATELY STABLE IN NEUTRAL SOLN, ... REMAINED EFFECTIVE BIOLOGICALLY AFTER STANDING 7 DAYS

Decomposition:

- >> Toxic gases and vapors (... phosphoric acid mist and carbon monoxide) may be released in a fire involving phosdrin.
- >> 300 °C

Corrosivity:

The ability of a chemical to damage or destroy other substances when it comes into contact.

- >> IT IS CORROSIVE TO CAST IRON, MILD AND SOME STAINLESS STEELS, & BRASS

Refractive Index:

- >> INDEX OF REFRACTION: 1.4494 @ 20 °C/D

Collision Cross Section:

Collision cross section (CCS) represents the effective area for the interaction between an individual ion and the neutral gas through which it is traveling (e.g., in ion mobility spectrometry (IMS) experiments). It quantifies the probability of a collision taking place between two or more particles.

- >> 146.02 Å² [M+Na]⁺
- >> 136.8 Å² [M+H]⁺

10. Stability And Reactivity

- >> Hydrolyzes rapidly as it dissolves in water.

11. Toxicological Information

Toxicity Summary:

- >> Mevinphos is a cholinesterase or acetylcholinesterase (AChE) inhibitor. A cholinesterase inhibitor (or 'anticholinesterase') suppresses the action of acetylcholinesterase. Because of its essential function, chemicals that interfere with the action of acetylcholinesterase are potent neurotoxins, causing excessive salivation and eye-watering in low doses, followed by muscle spasms and ultimately death. Nerve gases and many substances used in insecticides have been shown to act by binding a serine in the active site of acetylcholine esterase, inhibiting the enzyme completely. Acetylcholine esterase breaks down the neurotransmitter acetylcholine, which is released at nerve and muscle junctions, in order to allow the muscle or organ to relax. The result of acetylcholine esterase inhibition is that acetylcholine builds up and continues to act so that any nerve impulses are continually transmitted and muscle contractions do not stop. Among the most common acetylcholinesterase inhibitors are phosphorus-based compounds, which are designed to bind to the active site of the enzyme. The structural requirements are a phosphorus atom bearing two lipophilic groups, a leaving group (such as a halide or thiocyanate), and a terminal oxygen.

EPA Human Health Benchmarks for Pesticides:

This section provides the EPA human health benchmarks non-enforceable drinking water levels related to adverse health effects from drinking water exposure to contaminants that have no drinking water standards or health advisories.

Chemical Substance

- >> Mevinphos

Acute or One Day PAD (RfD) [mg/kg/day]

- >> 0.0003

Acute or One Day HHBPs [ppb]

- >> 2

Acute HHBP Sensitive Lifestage/Population

- >> Children

Chronic or One Day PAD (RfD) [mg/kg/day]

- >> 0.000025

Chronic or One Day HHBPs [ppb]

>> 0.15

Chronic HHBP Sensitive Lifestage/Population

>> General Population

Reference (PDF)

>> Human Health Benchmarks for Pesticides – 2021 Update

Evidence for Carcinogenicity:

Evidence that this chemical does or may cause cancer. The information here is collected from various sources by the Hazardous Substances Data Bank (HSDB).

>> A4; Not classifiable as a human carcinogen.

Carcinogen Classification:

This section provides the International Agency for Research on Cancer (IARC) Carcinogenic Classification and related monograph links. In the IARC Carcinogenic classification, chemicals are categorized into four groups: Group 1 (carcinogenic to humans), Group 2A (probably carcinogenic to humans), Group 2B (possibly carcinogenic to humans), and Group 3 (not classifiable as to its carcinogenicity to humans).

>> No indication of carcinogenicity to humans (not listed by IARC).

Health Effects:

>> Acute exposure to cholinesterase inhibitors can cause a cholinergic crisis characterized by severe nausea/vomiting, salivation, sweating, bradycardia, hypotension, collapse, and convulsions. Increasing muscle weakness is a possibility and may result in death if respiratory muscles are involved. Accumulation of ACh at motor nerves causes overstimulation of nicotinic expression at the neuromuscular junction. When this occurs symptoms such as muscle weakness, fatigue, muscle cramps, fasciculation, and paralysis can be seen. When there is an accumulation of ACh at autonomic ganglia this causes overstimulation of nicotinic expression in the sympathetic system. Symptoms associated with this are hypertension, and hypoglycemia. Overstimulation of nicotinic acetylcholine receptors in the central nervous system, due to accumulation of ACh, results in anxiety, headache, convulsions, ataxia, depression of respiration and circulation, tremor, general weakness, and potentially coma. When there is expression of muscarinic overstimulation due to excess acetylcholine at muscarinic acetylcholine receptors symptoms of visual disturbances, tightness in chest, wheezing due to bronchoconstriction, increased bronchial secretions, increased salivation, lacrimation, sweating, peristalsis, and urination can occur. Certain reproductive effects in fertility, growth, and development for males and females have been linked specifically to organophosphate pesticide exposure. Most of the research on reproductive effects has been conducted on farmers working with pesticides and insecticides in rural areas. In females menstrual cycle disturbances, longer pregnancies, spontaneous abortions, stillbirths, and some developmental effects in offspring have been linked to organophosphate pesticide exposure. Prenatal exposure has been linked to impaired fetal growth and development. Neurotoxic effects have also been linked to poisoning with OP pesticides causing four neurotoxic effects in humans: cholinergic syndrome, intermediate syndrome, organophosphate-induced delayed polyneuropathy (OPIDP), and chronic organophosphate-induced neuropsychiatric disorder (COPIND). These syndromes result after acute and chronic exposure to OP pesticides.

Exposure Routes:

>> The substance can be absorbed into the body by inhalation of its aerosol, through the skin and by ingestion.

>> inhalation, skin absorption, ingestion, skin and/or eye contact

Inhalation Exposure

>> Pupillary constriction, muscle cramp, excessive salivation. Blurred vision. Sweating. Nausea. Vomiting. Diarrhoea. Abdominal cramps. Dizziness. Convulsions. Unconsciousness.

Skin Exposure

>> MAY BE ABSORBED! Further see Inhalation.

Eye Exposure

>> Blurred vision.

Ingestion Exposure

>> See Inhalation.

>> irritation eyes, skin, respiratory system; miosis; rhinorrhea (discharge of thin nasal mucus); headache; chest tightness, wheezing, laryngeal spasm, salivation, cyanosis; anorexia, nausea, vomiting, abdominal cramps, diarrhea; paralysis; ataxia, convulsions; low blood pressure, cardiac irreg

Target Organs:

Organs that are affected by exposure to this chemical. Information in this section reflects human data unless otherwise noted.

>> Eyes, skin, respiratory system, central nervous system, cardiovascular system, blood cholinesterase

Adverse Effects:

An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

>> Other Poison – Organophosphate

>> Skin Sensitizer – An agent that can induce an allergic reaction in the skin.

>> ACGIH Carcinogen – Not Classifiable.

Toxicity Data:

>> LC50 (rat) = 14 ppm/1h

Treatment:

Treatment when exposed to toxin

>> If the compound has been ingested, rapid gastric lavage should be performed using 5% sodium bicarbonate. For skin contact, the skin should be washed with soap and water. If the compound has entered the eyes, they should be washed with large quantities of isotonic saline or water. In serious cases, atropine and/or pralidoxime should be administered. Anti-cholinergic drugs work to counteract the effects of excess acetylcholine and reactivate AChE. Atropine can be used as an antidote in conjunction with pralidoxime or other pyridinium oximes (such as trimedoxime or obidoxime), though the use of '-oximes' has been found to be of no benefit, or possibly harmful, in at least two meta-analyses. Atropine is a muscarinic antagonist, and thus blocks the action of acetylcholine peripherally.

Interactions:

>> PHOSDRIN OR TRICHLORPHON AT CONCN OF 20 & 100 UG/ML OF CULTURE FLUID HAVE ACTIVITY SIMILAR TO DICHLORVOS, IN THAT THEY LOWERED THE LEVEL OF AFLATOXIN PRODUCED BY ASPERGILLUS FLAVUS & CAUSED FORMATION OF SEVERAL ANTHRAQUINONE PIGMENTS.

Antidote and Emergency Treatment:

>> Treatment is the same as that for poisoning by other organic phosphorus cmpd ... The beneficial effects of oximes in people poisoned by mevinphos have been noted in several cases ... but not in all ... The importance of thorough bathing is emphasized by a case in which continuing illness suggested continuing dermal absorption.

Human Toxicity Excerpts:

>> IT WAS ADMIN ORALLY AT 25 UG/KG DAILY TO 8 MALE SUBJECTS FOR 28 DAYS. AT END OF EXPOSURE, 7% DECR IN SLOW FIBER MOTOR NERVE CONDUCTION VELOCITY & 38% INCR IN ACHILLES TENDON REFLEX FORCE. RED BLOOD CHOLINESTERASE DEPRESSION WAS 19%. NO EFFECT ON NEUROMUSCULAR TRANSMISSION.

Non-Human Toxicity Excerpts:

>> When groups of female rats were fed mevinphos at 0, 6.3, 12.5, 50, or 100 ppm, all rats died within 3 weeks at 100 ppm; at 50 ppm for 60 days, rats showed reduced growth, slight tremor, and brain cholinesterase only 20% of normal. The rats fed 6.3 ppm mevinphos showed slight tremors, and brain cholinesterase activity was 90% that of the controls.

Non-Human Toxicity Values:

>> LC50 Rat female inhalation 14 ppm/1 hr

Populations at Special Risk:

>> Persons with a history of reduced pulmonary function, convulsive disorders, or recent exposure to anticholinesterase agents would be expected to be at increased risk from exposure.

12. Ecological Information

ICSC Environmental Data:

>> The substance is very toxic to aquatic organisms. This substance may be hazardous to the environment. Special attention should be given to birds and bees. This substance does enter the environment under normal use. Great care, however, should be taken to avoid any additional release, for example through inappropriate disposal.

Average Daily Intake:

The average amount of the compound taken into the body through eating, drinking, or breathing.

>> Average daily intakes of mevinphos found in FDA's Total Diet Study for 8 age/sex groups (1986-1991) are (group, ug/kg body wt/day): 6-11 mo, 0.0048; 2 yr, 0.0078 ; 14-16 female, 0.0027 ; 14-16 male, 0.0020; 25-30 female, 0.0030; 25-30 male, 0.0019; 60-65 female, 0.0058; 60-65 male, 0.0052(1). The results of an analogous study conducted in 1982-1984

are (group, ug/kg body wt/day): 6–11 mo, 0.0071; 2 yr, 0.0121 ; 14–16 female, 0.0039 ; 14–16 male, 0.0029; 25–30 female, 0.0044; 25–30 male, 0.0024; 60–65 female, 0.0091; 60–65 male, 0.0083(2).

13. Disposal Considerations

Spillage Disposal

- >> Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Do NOT wash away into sewer. Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

Disposal Methods

- >> SRP: At the time of review, criteria for land treatment or burial (sanitary landfill) disposal practices are subject to significant revision. Prior to implementing land disposal of waste residue (including waste sludge), consult with environmental regulatory agencies for guidance on acceptable disposal practices.
- >> Contaminant removal from wastewater may be accomplished with air stripping.
- >> Potential candidate for rotary kiln incineration, with a temperature range of 820 to 1,600 °C and a residence time of seconds. Also, a potential candidate for fluidized bed incineration, with a temperature range of 450 to 980 °C, and a residence time of seconds. Also, a potential candidate for liquid injection incineration with a temperature range of 650 to 1,600 °C, and a residence time of 0.1 to 2 seconds. /Parathion/
- >> Manufacturers or formulators of very large amounts of pesticides may find it advantageous to build incinerators adequate to destroy all organic pesticides and equipped with scrubbers to remove acid wastes. /Organic pesticides/

14. Transport Information

DOT

Mevinphos

6.1

UN Pack Group: I

Reportable Quantity of 10 lb or 4

IATA

Mevinphos

6.1,

UN Pack Group: I

15. Regulatory Information

Clean Water Act Requirements:

The Clean Water Act (CWA) of 1972 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under CWA, the U.S. Environmental Protection Agency (EPA) developed the Toxic Pollutant List (40 CFR Part 401.15) and the Priority Pollutant List (40 CFR Part 423, Appendix A). These lists are to be used by EPA and States to develop the Effluent Guidelines regulations and ensure water quality criteria and standards.

- >> Designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance.

16. Other Information

Other Safety Information

Chemical Assessment

- >> IMAP assessments – 2-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-, methyl ester: Environment tier I assessment
- >> IMAP assessments – 2-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-, methyl ester: Human health tier I assessment

Chemical Assessment

- >> IMAP assessments – 2-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-, methyl ester, (E)-: Human health tier I assessment
- >> IMAP assessments – 2-Butenoic acid, 3-[(dimethoxyphosphinyl)oxy]-, methyl ester, (E)-: Environment tier I assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. Ionz is not responsible for any damages resulting from handling or contact with the product incorrectly."