

SAFETY DATA SHEET

Issue Date 27-Sep-2016 Revision Date 30-Jan-2018 Version 3

1. IDENTIFICATION

Product identifier

Product Name PhosVer® 3 Phosphate Reagent

Other means of identification

Product Code(s) 212599

Safety data sheet number M00035

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory Use Phosphate determination

Uses advised against None

Details of the supplier of the safety data sheet

Initial Supplier Identifier

Hach Sales & Service LP. 3020 Gore Road, London, Ontario N5V 4T7 Canada Tel: 1-800-665-7635

Manufacturer Address

Hach Company P.O. Box 389 Loveland, CO 80539 USA +1(970) 669-3050

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

CANUTEC 613-992-4624

2. HAZARD IDENTIFICATION

Classification

| Skin corrosion/irritation | Category 2 Sub-category A |
|--|---------------------------|
| Serious eye damage/eye irritation | Category 1 |
| Respiratory sensitization | |
| Skin sensitization | |
| Germ cell mutagenicity | |
| Carcinogenicity | |
| Reproductive toxicity | |
| Specific target organ toxicity (single exposure) | |
| Specific target organ toxicity (repeated exposure) | |

Label elements

Signal word - Danger

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Hazard statements

H315 - Causes skin irritation

H318 - Causes serious eye damage



Precautionary Statements

P302 + P352 - IF ON SKIN: Wash with plenty of water and soap

P332 + P313 - If skin irritation occurs: Get medical advice/attention

P362 + P364 - Take off contaminated clothing and wash it before reuse

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P363 - Wash contaminated clothing before reuse

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity.

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Other Hazards Known

May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Chemical Family Mixture.

Chemical nature No information available.

| Chemical name | Synonyms | CAS No. | Percent Range | Units | HMIRA# |
|-----------------------|---------------------|------------|---------------|-------|--------|
| Potassium pyrosulfate | No information | 7790-62-7 | 80 - 90% | g | - |
| | available | | | | |
| Sodium molybdate | No information | 7631-95-0 | 1 - 5% | g | - |
| | available | | | • | |
| Tetrasodium EDTA | Tetrasodium EDTA | 64-02-8 | <1% | g | - |
| | Tetrasodium | | | - | |
| | ethylenediaminetetr | | | | |
| | aacetate | | | | |
| Antimonate(2-), | No information | 28300-74-5 | <1% | g | - |

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| bis[.mu(2,3-dihydroxybut | available | | |
|--------------------------|-----------|--|--|
| anedioato(4-)-O1,O2:O3,O | | | |
| 4)]di-, dipotassium, | | | |
| trihydrate, stereoisomer | | | |

4. FIRST AID MEASURES

Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet to the doctor in

attendance.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical

attention if irritation develops and persists.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation.

Indication of any immediate medical attention and special treatment needed

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable Extinguishing Media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the

chemical

No information available.

Hazardous combustion products Sulfur oxides. Carbon monoxide, Carbon dioxide. Sodium monoxide. Potassium oxides.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

WHMIS Notice Only persons properly qualified to respond to an emergency involving hazardous

substances should respond to a spill involving chemicals. See Section 13, Special

Instructions for disposal assistance.

Personal precautions Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Ensure adequate ventilation.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off

contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up.

Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

| Chemical name | Alberta OEL | British Columbia OEL | Manitoba OEL | New Brunswick OEL | New Foundland & Labrador OEL |
|--|----------------------------|----------------------------|----------------------------|--------------------------|------------------------------|
| Sodium molybdate 1 - 5% | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 5 mg/m ³ | TWA: 0.5 mg/m ³ |
| Antimonate(2-), bis[.mu(2,3-dihydroxybut anedioato(4-)-O1,O2:O3,O 4)]di-, dipotassium, trihydrate, stereoisomer <1% | | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m³ | TWA: 0.5 mg/m ³ |

| Chemical name | Northwest | Nova Scotia OEL | Nunavut OEL | Ontario TWA | Prince Edward |
|--------------------------|-----------------------------|--|-----------------------------|----------------------------|----------------------------|
| | Territories OEL | | | | Island OEL |
| Sodium molybdate | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ |
| 1 - 5% | STEL: 1.5 mg/m ³ | , and the second | STEL: 1.5 mg/m ³ | , | · · |
| Antimonate(2-), | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ |
| bis[.mu(2,3-dihydroxybut | STEL: 1.5 mg/m ³ | | STEL: 1.5 mg/m ³ | | |
| anedioato(4-)-O1,O2:O3,O | | | | | |
| 4)]di-, dipotassium, | | | | | |
| trihydrate, stereoisomer | | | | | |
| <1% | | | | | |

| Chemical name | Quebec OEL | Saskatchewan OEL | Yukon OEL |
|------------------|--------------------------|----------------------------|----------------------------|
| Sodium molybdate | TWA: 5 mg/m ³ | TWA: 0.5 mg/m ³ | STEL: 10 mg/m ³ |

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| 1 - 5% | | STEL: 1.5 mg/m ³ | TWA: 5 mg/m ³ |
|--------------------------------------|----------------------------|-----------------------------|------------------------------|
| Antimonate(2-), | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | STEL: 0.75 mg/m ³ |
| bis[.mu(2,3-dihydroxybutanedioato(4- | | STEL: 1.5 mg/m ³ | TWA: 0.5 mg/m ³ |
|)-O1,O2:O3,O4)]di-, dipotassium, | | | - |
| trihydrate, stereoisomer | | | |
| <1% | | | |

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-------------------------------------|----------------------------|--------------------------------------|---------------------------------|
| Sodium molybdate | TWA: 0.5 mg/m ³ | TWA: 5 mg/m ³ | IDLH: 1000 mg/m ³ Mo |
| 1 - 5% | | (vacated) TWA: 5 mg/m ³ | _ |
| Antimonate(2-), | TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ | IDLH: 50 mg/m ³ Sb |
| bis[.mu(2,3-dihydroxybutanedioato(4 | - | (vacated) TWA: 0.5 mg/m ³ | TWA: 0.5 mg/m ³ Sb |
|)-O1,O2:O3,O4)]di-, dipotassium, | | | - |
| trihydrate, stereoisomer | | | |
| <1% | | | |

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand Protection Wear suitable gloves. Impervious gloves.

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do

not eat, drink or smoke when using this product.

Environmental exposure controls Local authorities should be advised if significant spillages cannot be contained. Do not

allow into any sewer, on the ground or into any body of water.

Thermal hazards None under normal processing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Solid

Appearance powder Color white

Odor Odorless Odor threshold Not applicable

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

Molecular weight Not applicable

pH No data available

Melting point/freezing point 105 °C / 221 °F

Boiling point / boiling range No data available

Evaporation rate Not applicable

Vapor pressure Not applicable

Vapor density (air = 1) Not applicable

Specific gravity (water = 1 / air = 1) 2.22

Partition Coefficient (n-octanol/water) $\log K_{ow} \sim -0.42$

Soil Organic Carbon-Water Partition

Coefficient

log K_{oc} ~ -0.23

Autoignition temperature No data available

Decomposition temperatureNo data available

Dynamic viscosity Not applicable

Kinematic viscosity Not applicable

Solubility(ies)

Water solubility

| Water solubility classification | Water solubility_ | Water Solubility Temperature |
|---------------------------------|-------------------|------------------------------|
| Soluble | > 1000 mg/L | 25 °C / 77 °F |

Solubility in other solvents

| Chemical Name | Solubility classification | <u>Solubility</u> | Solubility Temperature |
|---------------|---------------------------|-------------------|------------------------|
| Acid | Soluble | > 1000 mg/L | 25 °C / 77 °F |

Other Information

Metal Corrosivity

Steel Corrosion RateNo data available /Aluminum Corrosion RateNo data available /

Volatile Organic Compounds (VOC) Content

Not applicable

| Chemical name | CAS No. | Volatile organic compounds (VOC) content | CAA (Clean Air Act) |
|--------------------------------------|------------|--|---------------------|
| Potassium pyrosulfate | 7790-62-7 | No data available | - |
| Sodium molybdate | 7631-95-0 | No data available | - |
| Tetrasodium EDTA | 64-02-8 | No data available | - |
| Antimonate(2-), | 28300-74-5 | No data available | - |
| bis[.mu(2,3-dihydroxybutanedioato(4- | | | |
|)-O1,O2:O3,O4)]di-, dipotassium, | | | |
| trihydrate, stereoisomer | | | |

Explosive properties

Upper explosion limitNo data availableLower explosion limitNo data available

Flammable properties

Flash point Not applicable

Method No information available

Flammability Limit in Air

Upper flammability limit:No data availableLower flammability limit:No data available

Oxidizing properties No data available.

Bulk density No data available

Particle Size No information available
Particle Size Distribution No information available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Conditions to avoid None known based on information supplied.

Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation May cause irritation of respiratory tract.

Eye contact Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause

irreversible damage to eyes.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Aggravated Medical Conditions Eye disorders. Skin disorders. Respiratory disorders. Preexisting eye disorders. Blood

disorders. Kidney disorders.

Toxicologically synergistic

products

None known.

Toxicokinetics, metabolism and See ingredients information below.

distribution

| Chemical name | Toxicokinetics, metabolism and distribution |
|----------------------|--|
| Antimonate(2-), | Antimony compounds can cause dermatitis, conjunctivitis, nasal-septum ulceration through direct contact or |
| bis[.mu(2,3-dihydrox | by inhalation of dust or fumes. Antimony is also connected with kidney and liver degeneration and adverse |
| ybutanedioato(4-)-O1 | reproductive effects. |
| ,O2:O3,O4)]di-, | |
| dipotassium, | |
| trihydrate, | |
| stereoisomer | |
| (<1%) | |
| CAS#: 28300-74-5 | |

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. May cause redness and

tearing of the eyes.

Product Acute Toxicity Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Unknown Acute Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

| ATEmix (oral) | 2,775.00 mg/kg |
|-------------------------------|--------------------------|
| ATEmix (dermal) | No information available |
| ATEmix (inhalation-dust/mist) | No information available |
| ATEmix (inhalation-vapor) | No information available |
| ATEmix (inhalation-gas) | No information available |

Ingredient Acute Toxicity Data

Oral Exposure Route If available, see data below

| Chemical name | Endpoint | Reported | Exposure | Toxicological effects | Key literature references and |
|----------------------|------------------|------------|----------|-----------------------|-------------------------------|
| | type | dose | time | | sources for data |
| Potassium | Rat | 2340 mg/kg | None | None reported | Vendor SDS |
| pyrosulfate | LD50 | | reported | | |
| (80 - 90%) | | | | | |
| CAS#: 7790-62-7 | | | | | |
| Sodium molybdate | Rat | 4000 mg/kg | None | None reported | RTECS (Registry of Toxic |
| (1 - 5%) | LD50 | | reported | | Effects of Chemical |
| CAS#: 7631-95-0 | | | | | Substances) |
| Tetrasodium EDTA | Rat | 1658 mg/kg | None | None reported | ERMA (New Zealands |
| (<1%) | LD50 | | reported | | Environmental Risk |
| CAS#: 64-02-8 | | | | | Management Authority) |
| Antimonate(2-), | Rat | 115 mg/kg | None | None reported | Vendor SDS |
| bis[.mu(2,3-dihydrox | LD ₅₀ | | reported | · | |
| ybutanedioato(4-)-O1 | | | | | |

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| ,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer (<1%) CAS#: 28300-74-5 | | | | | |
|--|--------------------------------|---------------|------------------|-----------------------|--|
| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | Guinea pig LD ₅₀ | 310 mg/kg | None reported | None reported | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Antimonate(2-), bis[.mu(2,3-dihydrox ybutanedioato(4-)-O1 ,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer (<1%) CAS#: 28300-74-5 | Mouse LD₅o | 600 mg/kg | None reported | None reported | HSDB (Hazardous Substances Data Bank) |

Dermal Exposure Route

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|------------------|---------------|------------------|-----------------------|--|
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | Rat LD₅₀ | > 2000 mg/kg | None reported | None reported | Vendor SDS |

Inhalation (Dust/Mist) Exposure Route If available, see data below

| Chemical name | Chemical name Endpoint Reported Exposure Toxicolog | | Toxicological effects | Key literature references and | |
|---|--|-------------|-----------------------|------------------------------------|---|
| | type | dose | time | | sources for data |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | Rat LC ₅₀ | > 2.08 mg/L | 4 hours | No deaths occured at reported dose | ECHA (The European Chemicals Agency) |

Inhalation (Vapor) Exposure Route Inhalation (Gas) Exposure Route

If available, see data below If available, see data below

If available, see data below

Product Specific Target Organ Toxicity Single Exposure

Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
Inhalation (Gas) Exposure Route
If available, see data below

Aspiration toxicity

If available, see data below

Kinematic viscosity

Not applicable

Product Skin Corrosion/Irritation Data

No data available.

| i vo data availabic. | | | |
|----------------------|---------|-------------------------------------|--|
| Test method | Species | <u>Results</u> | Key literature references and sources for data |
| United States | Rabbit | Not corrosive or irritating to skin | Outside testing |
| Department of | | | |
| Transportation (DOT) | | | |
| Skin Corrosion Test | | | |

Ingredient Skin Corrosion/Irritation Data

If available, see data below

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|-------------------------|------------------|------------------|------------------|--|--|
| Potassium pyrosulfate (80 - 90%) CAS#: 7790-62-7 | None reported | None reported | None reported | None reported | Corrosive to skin | Vendor SDS |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | Standard Draize Test | Rabbit | 500 mg | 4 hours | Not corrosive or irritating to skin | ECHA (The European Chemicals Agency) |

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

If available, see data below

| Chemical name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|--|---------------|------------------|------------------|------------------|--|--|
| Potassium pyrosulfate (80 - 90%) CAS#: 7790-62-7 | None reported | None reported | None reported | None reported | Corrosive to eyes | Vendor SDS |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | Patch test | None reported | 200 mg | None reported | Not corrosive or irritating to eyes | ECHA (The European Chemicals Agency) |
| Antimonate(2-), bis[.mu(2,3-dihydrox ybutanedioato(4-)-O1 ,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer (<1%) CAS#: 28300-74-5 | None reported | Rabbit | 100 mg | 24 hours | Eye irritant | No information available |

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure RouteNo data available.Respiratory Sensitization Exposure RouteNo data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route If available, see data below.

| • · · · · · · • • · · · · · · · · · · · | | | , | |
|---|---|------------|---------------------------------------|--|
| Chemical name | Test method | Species | Results | Key literature references and sources for data |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | OECD Test No. 406: Skin Sensitization | Guinea pig | Not confirmed to be a skin sensitizer | Vendor SDS |

Respiratory Sensitization Exposure Route

If available, see data below.

Chronic Toxicity Information

Product Specific Target Organ Toxicity Repeat Dose Data

Oral Exposure Route

Dermal Exposure Route

Inhalation (Dust/Mist) Exposure Route

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route

No data available.

No data available.

No data available.

No data available.

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Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below
If available, see data below

Product Carcinogenicity Data

Oral Exposure RouteNo data availableDermal Exposure RouteNo data availableInhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Carcinogenicity Data

| Chemical name | CAS No. | ACGIH | IARC | NTP | OSHA |
|--------------------------|------------|-------|------|-----|------|
| Potassium pyrosulfate | 7790-62-7 | - | - | - | - |
| Sodium molybdate | 7631-95-0 | A3 | - | - | - |
| Tetrasodium EDTA | 64-02-8 | - | - | - | - |
| Antimonate(2-), | 28300-74-5 | - | - | - | - |
| bis[.mu(2,3-dihydroxybut | | | | | |
| anedioato(4-)-O1,O2:O3,O | | | | | |
| 4)]di-, dipotassium, | | | | | |
| trihydrate, stereoisomer | | | | | |

Legend

| ACGIH (American Conference of Governmental Industrial Hygienists) | A3 - Animal Carcinogen |
|---|------------------------|
| IARC (International Agency for Research on Cancer) | Does not apply |
| NTP (National Toxicology Program) | Does not apply |
| OSHA (Occupational Safety and Health Administration of the US Department of | Does not apply |
| Labor) | |

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below

Product Germ Cell Mutagenicity invitro Data

No data available.

Ingredient Germ Cell Mutagenicity invitro Data

If available, see data below

| Chemical name | Test | Cell Strain | Reported | Exposure | Results | Key literature |
|------------------|------------------|------------------|-----------|----------|--------------------------|---------------------|
| | | | dose | time | | references and |
| | | | | | | sources for data |
| Sodium molybdate | Phage inhibition | Escherichia coli | 16 mmol/L | None | Positive test result for | RTECS (Registry |
| (1 - 5%) | capacity | | | reported | mutagenicity | of Toxic Effects of |
| CAS#: 7631-95-0 | | | | | | Chemical |
| | | | | | | Substances) |
| Chemical name | Test | Cell Strain | Reported | Exposure | Results | Key literature |
| | | | dose | time | | references and |
| | | | | | | sources for data |
| Sodium molybdate | Sex chromosome | Saccharomyces | 80 mmol/L | None | Positive test result for | RTECS (Registry |
| (1 - 5%) | loss and | cerevisiae | | reported | | of Toxic Effects of |
| CAS#: 7631-95-0 | nondisjunction | | | | | Chemical |
| | - | | | | | Substances) |

Product Germ Cell Mutagenicity invivo Data

Oral Exposure Route

Dermal Exposure Route

No data available
No data available

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Inhalation (Dust/Mist) Exposure RouteNo data availableInhalation (Vapor) Exposure RouteNo data availableInhalation (Gas) Exposure RouteNo data available

Ingredient Germ Cell Mutagenicity invivo Data

Oral Exposure Route
Dermal Exposure Route
If available, see data below
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below

Product Reproductive Toxicity Data

Oral Exposure Route

Dermal Exposure Route

Inhalation (Dust/Mist) Exposure Route

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route

No data available

No data available

No data available

No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route
Inhalation (Dust/Mist) Exposure Route
Inhalation (Vapor) Exposure Route
Inhalation (Gas) Exposure Route
If available, see data below
Inhalation (Gas) Exposure Route
If available, see data below
If available, see data below

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product Ecological Data
Aquatic toxicity

Fish No data available
Crustacea No data available
Algae No data available

Ingredient Ecological Data

Aquatic toxicity

Fish If available, see ingredient data below

| 1 1311 | ii avaliable, eee ingrealent a | | | rigioaioni aata i | a polow | | |
|--|--------------------------------|---------------------|------|-------------------|--|--|--|
| Chemical name Exposure | | Species Endpo | | Reported | Key literature references and | | |
| | time | | type | dose | sources for data | | |
| Potassium pyrosulfate (80 - 90%) CAS#: 7790-62-7 | 96 hours | Oncorhynchus mykiss | LC50 | 420 mg/L | ERMA (New Zealands Environmental Risk Management Authority) | | |
| Sodium molybdate (1 - 5%) CAS#: 7631-95-0 | 96 hours | Oncorhynchus mykiss | LC50 | 800 mg/L | GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) | | |
| Antimonate(2-), bis[.mu(2,3-dihydrox ybutanedioato(4-)-O1 ,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer (<1%) CAS#: 28300-74-5 | 96 hours | None reported | LC50 | 12.5 mg/L | Vendor SDS | | |

| Crustacea If av | | | vailable, see ingredient data below | | | |
|-----------------|---------------|----------|-------------------------------------|----------|----------|-------------------------------|
| | Chemical name | Exposure | Species | Endpoint | Reported | Key literature references and |
| | | time | | type | dose | sources for data |

| Potassium | 48 Hours | Daphnia magna | EC ₅₀ | 140 mg/L | ERMA (New Zealands |
|-----------------|----------|---------------|------------------|----------|-------------------------------|
| pyrosulfate | | | | | Environmental Risk Management |
| (80 - 90%) | | | | | Authority) |
| CAS#: 7790-62-7 | | | | | |

Algae If available, see ingredient data below

Other Information

| Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations | | | | | |
|---|-----------------|------------|-----------------|--|--|
| Chemical name | Category | Persistent | Bioaccumulation | Inherently Toxic to Aquatic Organisms | |
| Antimonate(2-), bis[.mu(2,3-dihydroxybutanedi oato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer (<1%) CAS#: 28300-74-5 | Organometallics | Yes | No | Yes | |

Persistence and degradability

Product Biodegradability Data

No data available.

Ingredient Biodegradability Data

Bioaccumulation

Product Bioaccumulation Data

No data available.

Partition Coefficient (n-octanol/water) log K_{ow} ~ -0.42

Ingredient Bioaccumulation Data

Mobility

Soil Organic Carbon-Water Partition Coefficient log K₀c ~ -0.23

Water solubility

| Water solubility classification | Water solubility | Water Solubility Temperature |
|---------------------------------|------------------|------------------------------|
| Soluble | > 1000 mg/L | 25 °C / 77 °F |

Other adverse effects

Contains a substance with an endocrine-disrupting potential.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

<u>Transport Canada</u> Not regulated

TDG Not regulated

IATA Not regulated

IMDG Not regulated

Note: No special precautions necessary.

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

Regulatory information

National Inventories

DSL/NDSL Complies

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

Complies **TSCA EINECS/ELINCS** Complies **ENCS** Complies **IECSC** Complies Complies **KECL** Complies **PICCS** Complies TCSI **AICS** Complies **NZIoC** Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

Canada - CEPA - Mercury Containing Products

None

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

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Special Comments

None

NFPA and HMIS Classifications

| | NFPA | Health hazards - 3 | Flammability - 0 | Instability - 0 | Physical and Chemical |
|---|------|--------------------|------------------|----------------------|--------------------------|
| 1 | | | | | Properties - |
| Ī | HMIS | Health hazards - 3 | Flammability - 0 | Physical Hazards - 0 | Personal protection - X |
| ١ | | | | | - See section 8 for more |
| | | | | | information |

Key or legend to abbreviations and acronyms used in the safety data sheet

NIOSH IDLH Immediately Dangerous to Life or Health

ACGIH ACGIH (American Conference of Governmental Industrial Hygienists)

NDF no data

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

MAC Maximum Allowable Concentration Ceiling Ceiling Limit Value

X Listed Vacated These values have no official status. The only

binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state

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regulations.

SKN* Skin designation SKN+ Skin sensitization
RSP+ Respiratory sensitization ** Hazard Designation
C Carcinogen R Reproductive toxicant

M mutagen

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Revision Note

SDS sections updated

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Disclaimer

EN / HGHS

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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End of Safety Data Sheet
