



**Be Right™**

# SAFETY DATA SHEET

Issue Date 04-May-2021

Revision Date 08-Aug-2023

Version 8.2

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## 1. IDENTIFICATION

### Product identifier

**Product Name** PhosVer® 3 Phosphate Reagent

### Other means of identification

**Product Code(s)** 2106046

**Safety data sheet number** M00035

**UN/ID no** UN3288

### Recommended use of the chemical and restrictions on use

**Recommended Use** Water Analysis. Phosphate determination.

**Uses advised against** Consumer use.

**Restrictions on use** None.

### Details of the supplier of the safety data sheet

#### **Manufacturer Address**

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

#### Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                           |            |
|-------------------------------------------|------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 3 |
| Skin corrosion/irritation                 | Category 2 |
| Serious eye damage/eye irritation         | Category 1 |

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### **Signal word**

Danger

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#### Hazard statements

H315 - Causes skin irritation  
H318 - Causes serious eye damage  
H331 - Toxic if inhaled

#### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
P332 + P313 - If skin irritation occurs: Get medical attention  
P362 - Take off contaminated clothing and wash before reuse  
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/physician

#### Other Hazards Known

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

##### Chemical Family

Mixture.

##### Chemical nature

Mixture of inorganic salts, Mixture of organic compounds.

Percent ranges are used where confidential product information is applicable.

| Chemical name                                                                                                   | CAS No     | Percent Range | HMRIC # |
|-----------------------------------------------------------------------------------------------------------------|------------|---------------|---------|
| Potassium pyrosulfate                                                                                           | 7790-62-7  | 80 - 90%      | -       |
| L-Ascorbic acid                                                                                                 | 50-81-7    | 10 - 20%      | -       |
| Sodium molybdate                                                                                                | 7631-95-0  | 1 - 5%        | -       |
| Tetrasodium EDTA, dihydrate                                                                                     | 10378-23-1 | <1%           | -       |
| Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer | 28300-74-5 | <1%           | -       |

### 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.

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. |
| <b>Eye contact</b>                        | 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.                                                                                                                                                                                                              |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.                                                                                                                                                                                                                                                                                                                                        |
| <b>Ingestion</b>                          | 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 or poison control center immediately.                                                                                                                                                                                                                                                                            |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.                                            |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

|                                                       |                                                                                                                                    |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Unsuitable Extinguishing Media</b>                 | Caution: Use of water spray when fighting fire may be inefficient.                                                                 |
| <b>Specific hazards arising from the chemical</b>     | No information available.                                                                                                          |
| <b>Hazardous combustion products</b>                  | Sulfur oxides. Carbon monoxide, Carbon dioxide. Sodium monoxide. Potassium oxides.                                                 |
| <b>Special protective equipment for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

## 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

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

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Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**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**

Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections**

See section 8 for more information. See section 13 for more information.

## 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. Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation.

**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.

**Flammability class**

Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

| Chemical name                                                                                                                                 | ACGIH TLV                                                      | OSHA PEL                                                           | NIOSH                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|
| Sodium molybdate<br>CAS#: 7631-95-0                                                                                                           | TWA: 0.5 mg/m <sup>3</sup> Mo<br>respirable particulate matter | TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 5 mg/m <sup>3</sup>     | IDLH: 1000 mg/m <sup>3</sup> Mo                                |
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-<br>)-O1,O2:O3,O4)]di-, dipotassium,<br>trihydrate, stereoisomer<br>CAS#: 28300-74-5 | TWA: 0.5 mg/m <sup>3</sup> Sb                                  | TWA: 0.5 mg/m <sup>3</sup><br>(vacated) TWA: 0.5 mg/m <sup>3</sup> | IDLH: 50 mg/m <sup>3</sup> Sb<br>TWA: 0.5 mg/m <sup>3</sup> Sb |

**Appropriate engineering controls**

**Engineering Controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are

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. Do not breathe dust. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the 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         |
| Odor           | Odorless       |
| Color          | white          |
| Odor threshold | Not applicable |

| Property                                        | Values                      | Remarks • Method |
|-------------------------------------------------|-----------------------------|------------------|
| Molecular weight                                | No data available           |                  |
| pH                                              | 1.5                         | 5% @ 20°C        |
| Melting point / freezing point                  | 105 °C / 221 °F             |                  |
| Initial boiling point and boiling range         | No data available           |                  |
| Evaporation rate                                | Not applicable              |                  |
| Vapor pressure                                  | Not applicable              |                  |
| Relative vapor density                          | No data available           |                  |
| Specific gravity - VALUE 1                      | 2.22                        |                  |
| Partition coefficient                           | log K <sub>ow</sub> ~ -0.42 |                  |
| Soil Organic Carbon-Water Partition Coefficient | log K <sub>oc</sub> ~ -0.23 |                  |
| Autoignition temperature                        | No data available           |                  |
| Decomposition temperature                       | No data available           |                  |
| Dynamic viscosity                               | Not applicable              |                  |
| Kinematic viscosity                             | Not applicable              |                  |

### Solubility(ies)

#### Water solubility

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

#### Solubility in other solvents

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

#### Other information

##### Metal Corrosivity

**Steel Corrosion Rate**

No data available

**Aluminum Corrosion Rate**

No 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                        | -                   |
| L-Ascorbic acid                                                                                                 | 50-81-7    | No data available                        | -                   |
| Sodium molybdate                                                                                                | 7631-95-0  | No data available                        | -                   |
| Tetrasodium EDTA, dihydrate                                                                                     | 10378-23-1 | Not applicable                           | -                   |
| Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer | 28300-74-5 | No data available                        | -                   |

##### Explosive properties

**Upper explosion limit**

No data available

**Lower explosion limit**

No data available

##### Flammable properties

**Flash point**

Not applicable

##### Flammability Limit in Air

**Upper flammability limit:**

No data available

**Lower flammability limit:**

No data available

##### Oxidizing properties

No data available.

##### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

##### Reactivity

Not applicable.

##### Chemical stability

Stable under normal conditions.

##### Explosion data

**Sensitivity to Mechanical Impact** None.

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**Sensitivity to Static Discharge** None.

**Possibility of hazardous reactions**  
None under normal processing.

**Hazardous polymerization**  
Hazardous polymerization does not occur.

**Conditions to avoid**  
Excessive heat.

**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**

|                     |                                                                                                                                       |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | May cause irritation of respiratory tract. Toxic by inhalation.                                                                       |
| <b>Eye contact</b>  | Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.                       |
| <b>Skin contact</b> | Causes skin irritation.                                                                                                               |
| <b>Ingestion</b>    | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.                                                       |
| <b>Symptoms</b>     | Redness. Burning. May cause blindness. May cause redness and tearing of the eyes. Coughing and/ or wheezing. Difficulty in breathing. |

**Acute toxicity**  
Toxic if inhaled

**Mixture**  
No data available.

**Ingredient Acute Toxicity Data**  
Test data reported below.

#### **Oral Exposure Route**

| Chemical name                                                                                                       | Endpoint type           | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---------------------------------------------------------------------------------------------------------------------|-------------------------|---------------|---------------|-----------------------|------------------------------------------------|
| Sodium molybdate<br>(1 - 5%)<br>CAS#: 7631-95-0                                                                     | Rat<br>LD <sub>50</sub> | 4000 mg/kg    | None reported | None reported         | RTECS                                          |
| Tetrasodium EDTA,<br>dihydrate<br>(<1%)<br>CAS#: 10378-23-1                                                         | Rat<br>LD <sub>50</sub> | 2700 mg/kg    | None reported | None reported         | IUCLID                                         |
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydrox<br>ybutanedioato(4-)-O1<br>,O2:O3,O4)]di-,<br>dipotassium,<br>trihydrate, | Rat<br>LD <sub>50</sub> | 115 mg/kg     | None reported | None reported         | Vendor SDS                                     |

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|                                           |  |  |  |  |  |
|-------------------------------------------|--|--|--|--|--|
| stereoisomer<br>(<1%)<br>CAS#: 28300-74-5 |  |  |  |  |  |
|-------------------------------------------|--|--|--|--|--|

#### Dermal Exposure Route

| Chemical name                                   | Endpoint type           | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|-------------------------------------------------|-------------------------|---------------|---------------|-----------------------|------------------------------------------------|
| Sodium molybdate<br>(1 - 5%)<br>CAS#: 7631-95-0 | Rat<br>LD <sub>50</sub> | > 2000 mg/kg  | None reported | None reported         | Vendor SDS                                     |

#### Inhalation (Dust/Mist) Exposure Route

| Chemical name                                          | Endpoint type           | Reported dose | Exposure time | Toxicological effects           | Key literature references and sources for data |
|--------------------------------------------------------|-------------------------|---------------|---------------|---------------------------------|------------------------------------------------|
| Potassium pyrosulfate<br>(80 - 90%)<br>CAS#: 7790-62-7 | Rat<br>LC <sub>50</sub> | 0.375 mg/L    | 4 hours       | Upper Respiratory Tract lesions | ECHA                                           |

#### Unknown Acute Toxicity

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

#### Acute Toxicity Estimations (ATE)

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

|                               |                          |
|-------------------------------|--------------------------|
| ATEmix (oral)                 | 69,038.00 mg/kg          |
| ATEmix (dermal)               | No information available |
| ATEmix (inhalation-dust/mist) | 0.619 mg/l               |
| ATEmix (inhalation-vapor)     | No information available |
| ATEmix (inhalation-gas)       | No information available |

#### Skin corrosion/irritation

Classification based on data available for ingredients. Irritating to skin.

#### Mixture

Test data reported below.

| Test method                                                                   | Species | Reported dose | Exposure time | Results               | Key literature references and sources for data |
|-------------------------------------------------------------------------------|---------|---------------|---------------|-----------------------|------------------------------------------------|
| United States<br>Department of<br>Transportation (DOT)<br>Skin Corrosion Test | Rabbit  | None reported | None reported | Not corrosive to skin | Internal Data<br>Outside testing               |

#### Ingredient Skin Corrosion/Irritation Data

Test data reported below.

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

#### Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

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**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

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

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

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

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

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#### **Carcinogenicity**

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

#### **Ingredient Carcinogenicity Data**

No data available.

| Chemical name                                                                                                   | CAS No     | ACGIH | IARC | NTP | OSHA |
|-----------------------------------------------------------------------------------------------------------------|------------|-------|------|-----|------|
| Potassium pyrosulfate                                                                                           | 7790-62-7  | -     | -    | -   | -    |
| L-Ascorbic acid                                                                                                 | 50-81-7    | -     | -    | -   | -    |
| Sodium molybdate                                                                                                | 7631-95-0  | A3    | -    | -   | -    |
| Tetrasodium EDTA, dihydrate                                                                                     | 10378-23-1 | -     | -    | -   | -    |
| Antimonate(2-), bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-, dipotassium, trihydrate, stereoisomer | 28300-74-5 | -     | -    | -   | -    |

#### **Legend**

|                                                                          |                        |
|--------------------------------------------------------------------------|------------------------|
| <b>ACGIH (American Conference of Governmental Industrial Hygienists)</b> | A3 - Animal Carcinogen |
| <b>IARC (International Agency for Research on Cancer)</b>                | Does not apply         |
| <b>NTP (National Toxicology Program)</b>                                 | Does not apply         |
| <b>OSHA</b>                                                              | Does not apply         |

#### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

#### **Mixture *in vitro* Data**

No data available.

#### **Substance *in vitro* Data**

Test data reported below.

| Chemical name                                | Test                      | Cell Strain      | Reported dose | Exposure time | Results                               | Key literature references and sources for data |
|----------------------------------------------|---------------------------|------------------|---------------|---------------|---------------------------------------|------------------------------------------------|
| L-Ascorbic acid (10 - 20%)<br>CAS#: 50-81-7  | DNA damage                | Human fibroblast | 0.2 mmol/L    | None reported | Positive test result for mutagenicity | RTECS                                          |
| Sodium molybdate (1 - 5%)<br>CAS#: 7631-95-0 | Phage inhibition capacity | Escherichia coli | 16 mmol/L     | None reported | Positive test result for mutagenicity | RTECS                                          |

#### **Mixture *in vivo* Data**

No data available.

#### **Substance *in vivo* Data**

No data available.

#### **Reproductive toxicity**

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

#### **Ingredient Reproductive Toxicity Data**

Test data reported below.

#### Oral Exposure Route

| Chemical name                                  | Endpoint type                  | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|------------------------------------------------|--------------------------------|---------------|---------------|-----------------------|------------------------------------------------|
| L-Ascorbic acid<br>(10 - 20%)<br>CAS#: 50-81-7 | Guinea pig<br>TD <sub>Lo</sub> | 19500 mg/kg   | 28 days       | None reported         | RTECS                                          |

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Based on available data, the classification criteria are not met.

#### Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Mixture

#### Aquatic Acute Toxicity

No data available.

#### Aquatic Chronic Toxicity

No data available.

#### Substance

#### Aquatic Acute Toxicity

Test data reported below.

#### Fish

| Chemical name                                                                                                                                                | Exposure time | Species                    | Endpoint type    | Reported dose | Key literature references and sources for data |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------|------------------|---------------|------------------------------------------------|
| Potassium pyrosulfate<br>(80 - 90%)<br>CAS#: 7790-62-7                                                                                                       | 96 hours      | <i>Oncorhynchus mykiss</i> | LC <sub>50</sub> | 420 mg/L      | ERMA                                           |
| L-Ascorbic acid<br>(10 - 20%)<br>CAS#: 50-81-7                                                                                                               | 96 hours      | None reported              | LC <sub>50</sub> | 44200 mg/L    | ECOSARS                                        |
| Sodium molybdate<br>(1 - 5%)<br>CAS#: 7631-95-0                                                                                                              | 96 hours      | <i>Oncorhynchus mykiss</i> | LC <sub>50</sub> | 800 mg/L      | GESTIS                                         |
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,<br>O2:O3,O4)]di-,<br>dipotassium,<br>trihydrate,<br>stereoisomer<br>(<1%)<br>CAS#: 28300-74-5 | 96 hours      | None reported              | LC <sub>50</sub> | 12.5 mg/L     | Vendor SDS                                     |

#### Crustacea

| Chemical name                       | Exposure time | Species              | Endpoint type    | Reported dose | Key literature references and sources for data |
|-------------------------------------|---------------|----------------------|------------------|---------------|------------------------------------------------|
| Potassium pyrosulfate<br>(80 - 90%) | 48 Hours      | <i>Daphnia magna</i> | EC <sub>50</sub> | 140 mg/L      | ERMA                                           |

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|------------------------------------------------|----------|---------------|------------------|------------|---------|
| CAS#: 7790-62-7                                |          |               |                  |            |         |
| L-Ascorbic acid<br>(10 - 20%)<br>CAS#: 50-81-7 | 48 Hours | None reported | LC <sub>50</sub> | 17500 mg/L | ECOSARS |

#### Algae

| Chemical name                                  | Exposure time | Species       | Endpoint type    | Reported dose | Key literature references and sources for data |
|------------------------------------------------|---------------|---------------|------------------|---------------|------------------------------------------------|
| L-Ascorbic acid<br>(10 - 20%)<br>CAS#: 50-81-7 | 96 hours      | None reported | EC <sub>50</sub> | 29675 mg/L    | ECOSARS                                        |

#### Aquatic Chronic Toxicity

No data available.

#### Persistence and degradability

##### Mixture

No data available.

##### Bioaccumulation

MATERIAL DOES NOT BIOACCUMULATE

##### Mixture

No data available.

#### Partition coefficient

log K<sub>ow</sub> ~ -0.42

#### Mobility

#### Soil Organic Carbon-Water Partition Coefficient

log K<sub>oc</sub> ~ -0.23

#### Other adverse effects

No information available

### 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.

##### US EPA Waste Number

Not applicable, D002

### 14. TRANSPORT INFORMATION

#### DOT

|                                 |                                |
|---------------------------------|--------------------------------|
| UN/ID no                        | UN3288                         |
| Proper shipping name            | TOXIC SOLID, INORGANIC, N.O.S. |
| DOT Technical Name              | Potassium pyrosulfate          |
| Transport hazard class(es)      | 6.1                            |
| Packing Group                   | III                            |
| Emergency Response Guide Number | 151                            |

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**TDG**

|                                   |                                |
|-----------------------------------|--------------------------------|
| <b>UN/ID no</b>                   | UN3288                         |
| <b>Proper shipping name</b>       | TOXIC SOLID, INORGANIC, N.O.S. |
| <b>TDG Technical Name</b>         | Potassium pyrosulfate          |
| <b>Transport hazard class(es)</b> | 6.1                            |
| <b>Packing Group</b>              | III                            |

**IATA**

|                                   |                                |
|-----------------------------------|--------------------------------|
| <b>UN number or ID number</b>     | UN3288                         |
| <b>Proper shipping name</b>       | Toxic solid, inorganic, n.o.s. |
| <b>IATA Technical Name</b>        | Potassium pyrosulfate          |
| <b>Transport hazard class(es)</b> | 6.1                            |
| <b>Packing group</b>              | III                            |
| <b>ERG Code</b>                   | 6L                             |

**IMDG**

|                                   |                                |
|-----------------------------------|--------------------------------|
| <b>UN number or ID number</b>     | UN3288                         |
| <b>Proper shipping name</b>       | TOXIC SOLID, INORGANIC, N.O.S. |
| <b>IMDG Technical Name</b>        | Potassium pyrosulfate          |
| <b>Transport hazard class(es)</b> | 6.1                            |
| <b>Packing Group</b>              | III                            |
| <b>EmS-No</b>                     | F-A, S-A                       |
| <b>Special Provisions</b>         | 223, 274                       |

**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

**National Inventories**

|                 |          |
|-----------------|----------|
| <b>TSCA</b>     | Complies |
| <b>DSL/NDSL</b> | Complies |

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

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

**International Inventories**

|                      |          |
|----------------------|----------|
| <b>EINECS/ELINCS</b> | Complies |
| <b>ENCS</b>          | Complies |
| <b>IECSC</b>         | Complies |
| <b>KECL</b>          | Complies |
| <b>PICCS</b>         | Complies |
| <b>TCSI</b>          | Complies |
| <b>AICS</b>          | Complies |
| <b>NZIoC</b>         | Complies |

**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

## US Federal Regulations

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical name                                                                                                                             | SARA 313 - Threshold Values % |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-,<br>dipotassium, trihydrate, stereoisomer (CAS #: 28300-74-5) | 1.0                           |

### SARA 311/312 Hazard Categories

|                                   |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire hazard                       | No  |
| Sudden release of pressure hazard | No  |
| Reactive Hazard                   | No  |

### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical name                                                                                                                       | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-,<br>dipotassium, trihydrate, stereoisomer<br>28300-74-5 | -                           | X                      | -                         | X                          |

### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical name                                                                                                                       | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                  |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------|-------------------------------------------|
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-,<br>dipotassium, trihydrate, stereoisomer<br>28300-74-5 | 100 lb                   | -              | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ |

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

### U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

| Chemical name                                                                                                                       | New Jersey | Massachusetts | Pennsylvania |
|-------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|--------------|
| Antimonate(2-),<br>bis[.mu.-(2,3-dihydroxybutanedioato(4-)-O1,O2:O3,O4)]di-,<br>dipotassium, trihydrate, stereoisomer<br>28300-74-5 | X          | X             | X            |

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#### U.S. EPA Label Information

| Chemical name    | FIFRA    | FDA                              |
|------------------|----------|----------------------------------|
| L-Ascorbic acid  | 180.0950 | 21 CFR 182.3013, 21 CFR 182.8013 |
| Sodium molybdate | 180.0920 | -                                |

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

#### Special Comments

None

#### Additional information

#### **Global Automotive Declarable Substance List (GADSL)**

Not applicable

#### **NFPA and HMIS Classifications**

| NFPA | Health hazards - 3 | Flammability - 0 | Instability - 0      | Physical and chemical properties - |
|------|--------------------|------------------|----------------------|------------------------------------|
| HMIS | Health hazards - 3 | Flammability - 0 | Physical hazards - 0 | Personal protection -<br>X<br>- I  |

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

|             |                                                                                             |
|-------------|---------------------------------------------------------------------------------------------|
| ACGIH       | ACGIH (American Conference of Governmental Industrial Hygienists)                           |
| ATSDR       | ATSDR (Agency for Toxic Substances and Disease Registry)                                    |
| CCRIS       | CCRIS (Chemical Carcinogenesis Research Information System)                                 |
| CDC         | CDC (Center for Disease Control)                                                            |
| CEPA        | CEPA (Canadian Environmental Protection Agency)                                             |
| CICAD       | CICAD (Concise International Chemical Assessment Documents)                                 |
| ECHA        | ECHA (The European Chemicals Agency)                                                        |
| EEA         | EEA (European Environment Agency)                                                           |
| EPA         | EPA (Environmental Protection Agency)                                                       |
| ERMA        | ERMA (New Zealand's Environmental Risk Management Authority)                                |
| ECOSARS     | Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™     |
| FDA         | FDA (Food & Drug Administration)                                                            |
| GESTIS      | GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) |
| HSDB        | HSDB (Hazardous Substances Data Bank)                                                       |
| INERIS      | INERIS (The National Industrial Environment and Risks Institute)                            |
| IPCS INCHEM | IPCS INCHEM (International Programme on Chemical Safety)                                    |
| IUCLID      | IUCLID (The International Uniform Chemical Information Database)                            |
| NITE        | Japan National Institute of Technology and Evaluation (NITE)                                |
| NIH         | NIH (National Institutes of Health)                                                         |
| NIOSH       | NIOSH (National Institute for Occupational Safety and Health)                               |
| LOLI        | LOLI (List of Lists - An International Chemical Regulatory Database)                        |
| NDF         | no data                                                                                     |
| NICNAS      | Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)         |
| NIOSH IDLH  | Immediately Dangerous to Life or Health                                                     |
| OSHA        | OSHA (Occupational Safety and Health Administration of the US Department of Labor)          |
| PEEN        | PEEN (Pan European Ecological Network)                                                      |
| RTECS       | RTECS (Registry of Toxic Effects of Chemical Substances)                                    |
| SIDS        | SIDS (Screening Information Dataset) for High Volume Chemicals                              |
| SYKE        | The Finnish Environment Institute (SYKE)                                                    |
| USDA        | USDA (United States Department of Agriculture)                                              |
| USDC        | USDC (United States Department of Commerce)                                                 |

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WHO

WHO (World Health Organization)

**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 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  
2

**Disclaimer**

**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**