# SAFETY DATA SHEET



## 1. IDENTIFICATION

**Product identifier**
**Product Name** Amino Acid Reagent for Phosphate and Silica

**Other means of identification**
**Product Code(s)** 193432

**Safety data sheet number** M00295

**Recommended use of the chemical and restrictions on use**
**Recommended Use** Water Analysis. Silica determination. Phosphate determination.
**Uses advised against** Consumer use.
**Restrictions on use** For Laboratory Use Only.

**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)

| | |
|---|---|
| Serious eye damage/eye irritation | Category 1 |
| Respiratory sensitization | Category 1 |
| Reproductive toxicity | Category 1B |
| Chronic aquatic toxicity | Category 3 |

**Hazards not otherwise classified (HNOC)**
Not applicable

**Label elements**

**Signal word**
Danger

**Hazard statements**
H318 - Causes serious eye damage
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H360 - May damage fertility or the unborn child
H412 - Harmful to aquatic life with long lasting effects

**Precautionary statements**
P280 - Wear protective gloves, protective clothing, eye protection, and 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/physician
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P285 - In case of inadequate ventilation wear respiratory protection
P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P501 - Dispose of contents/ container to an approved waste disposal plant
P201 - Obtain special instructions before use
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P405 - Store locked up
P273 - Avoid release to the environment

**Other Hazards Known**
May be harmful if swallowed
May be harmful in contact with skin
Causes mild skin irritation
Harmful to aquatic life

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**
Not applicable

**Mixture**

**Chemical Family** Mixture.
**Chemical nature** aqueous solution.

**Percent ranges are used where confidential product information is applicable.**

| Chemical name | CAS No | Percent Range | HMRIC # |
|---|---|---|---|
| **N,N-Dimethylformamide** | 68-12-2 | 20 - 30% | - |
| **Sodium metabisulfite** | 7681-57-4 | 3 - 7% | - |
| **Sodium sulfite** | 7757-83-7 | 1 - 5% | - |

## 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. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

**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. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

**Ingestion** Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. May produce an allergic reaction. Get immediate medical advice/attention.

**Self-protection of the first aider** 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. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

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

**Symptoms** Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.

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

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

**Specific hazards arising from the chemical** Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.

**Hazardous combustion products** Sulfur oxides. Dimethylamine. Nitrogen oxides. Carbon monoxide, Carbon dioxide.

**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

**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.

Ensure adequate ventilation. 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** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Remove contaminated clothing and shoes.

**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** Class IIIB

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

| Chemical name | ACGIH TLV | OSHA PEL | NIOSH |
|---|---|---|---|
| N,N-Dimethylformamide<br>CAS#: 68-12-2 | TWA: 5 ppm<br>S* | TWA: 10 ppm<br>TWA: 30 mg/m$^3$<br>(vacated) TWA: 10 ppm<br>(vacated) TWA: 30 mg/m$^3$<br>(vacated) SKN*<br>* | IDLH: 500 ppm<br>TWA: 10 ppm<br>TWA: 30 mg/m$^3$ |
| Sodium metabisulfite<br>CAS#: 7681-57-4 | TWA: 5 mg/m$^3$ | (vacated) TWA: 5 mg/m$^3$ | TWA: 5 mg/m$^3$ |

**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. Ensure adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. |
| **Hand Protection** | Wear suitable gloves. |
| **Eye/face protection** | Tight sealing safety goggles. |
| **Skin and body protection** | Wear suitable protective 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. Remove and wash contaminated clothing and gloves, including the inside, before re-use. 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** | Liquid | | |
| **Appearance** | aqueous solution | **Color** | yellow |
| **Odor** | Amine | **Odor threshold** | No data available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **Molecular weight** | No data available | |
| **pH** | 5.8 | |
| **Melting point/freezing point** | ~ -21 °C / -5.8 °F | |
| **Boiling point / boiling range** | 102 °C / 215.6 °F | |
| **Evaporation rate** | 0.59 (water = 1) | |
| **Vapor pressure** | 21.602 mm Hg / 2.88 kPa at 25 °C / 77 °F | |
| **Relative vapor density** | 0.62 | |
| **Specific gravity (water = 1 / air = 1)** | 1.065 | |
| **Partition Coefficient (n-octanol/water)** | Not applicable | |
| **Soil Organic Carbon-Water Partition Coefficient** | Not applicable | |
| **Autoignition temperature** | No data available | |
| **Decomposition temperature** | No data available | |
| **Dynamic viscosity** | No data available | |
| **Kinematic viscosity** | No data available | |

**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 | Solubility | Solubility Temperature |
|---|---|---|---|
| None reported | No information available | No data available | No information available |

**Other information**

**Metal Corrosivity**

**Steel Corrosion Rate** No data available
**Aluminum Corrosion Rate** No data available

**Volatile Organic Compounds (VOC) Content**

| Chemical name | CAS No | Volatile organic compounds (VOC) content | CAA (Clean Air Act) |
|---|---|---|---|
| N,N-Dimethylformamide | 68-12-2 | No data available | X |
| Sodium metabisulfite | 7681-57-4 | Not applicable | - |
| Sodium sulfite | 7757-83-7 | No data available | - |

**Explosive properties**

**Upper explosion limit** No data available
**Lower explosion limit** No data available

**Flammable properties**

**Flash point** > 100 °C / 212 °F
**Method** CC (closed cup)

**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.
**Sensitivity to Static Discharge** None.

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

**Hazardous polymerization**
None under normal processing.

**Conditions to avoid**
None known based on information supplied.

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

**Hazardous decomposition products**
Nitrogen oxides. Carbon dioxide. Carbon monoxide. Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product Information**

| | |
|---|---|
| **Inhalation** | May cause sensitization in susceptible persons. |
| **Eye contact** | Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes. |
| **Skin contact** | May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. |
| **Ingestion** | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause additional affects as listed under "Inhalation". |
| **Symptoms** | Redness. Burning. May cause blindness. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. |

**Acute toxicity**
Based on available data, the classification criteria are not met

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

**Oral Exposure Route**

| **Key literature references and sources for data** |
|---|
| Outside testing |

**Inhalation (Gas) Exposure Route**

**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 |
|---|---|---|---|---|---|
| N,N-Dimethylformamide | Rat $LD_{50}$ | 2800 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information |

| | | | | | |
|---|---|---|---|---|---|
| (20 - 30%)<br>CAS#: 68-12-2 | | | | | Database) |
| Sodium metabisulfite<br>(3 - 7%)<br>CAS#: 7681-57-4 | Rat<br>$LD_{50}$ | 500 mg/kg | None reported | None reported | Vendor SDS |
| Sodium sulfite<br>(1 - 5%)<br>CAS#: 7757-83-7 | Rat<br>$LD_{50}$ | 3560 mg/kg | None reported | None reported | GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) |

**Dermal Exposure Route**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide<br>(20 - 30%)<br>CAS#: 68-12-2 | Rat<br>$LD_{50}$ | 1100 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information Database) |
| Sodium metabisulfite<br>(3 - 7%)<br>CAS#: 7681-57-4 | Rat<br>$LD_{50}$ | > 2000 mg/kg | None reported | None reported | LOLI |
| Sodium sulfite<br>(1 - 5%)<br>CAS#: 7757-83-7 | Rat<br>$LD_{50}$ | 2000 mg/kg | None reported | None reported | EPA (United States Environmental Protection Agency) |

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

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide<br>(20 - 30%)<br>CAS#: 68-12-2 | Rat<br>$LC_{50}$ | > 5.9 mg/L | 4 hours | None reported | IUCLID (The International Uniform Chemical Information Database) |
| Sodium metabisulfite<br>(3 - 7%)<br>CAS#: 7681-57-4 | Rat<br>$LC_{50}$ | > 5.5 mg/L | 4 hours | None reported | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium sulfite<br>(1 - 5%)<br>CAS#: 7757-83-7 | Rat<br>$LC_{50}$ | 5.5 mg/L | 4 hours | None reported | ECHA (The European Chemicals Agency) |

**Inhalation (Vapor) Exposure Route**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide<br>(20 - 30%)<br>CAS#: 68-12-2 | None reported | None reported | None reported | None reported | No information available |

**Unknown Acute Toxicity**
0.01% 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)** | No information available |
| **ATEmix (dermal)** | 3,941.10 mg/kg |
| **ATEmix (inhalation-dust/mist)** | 6.25 mg/l |

| | |
|---|---|
| **ATEmix (inhalation-vapor)** | 45.30 mg/l |
| **ATEmix (inhalation-gas)** | No information available |

**Skin corrosion/irritation**
Based on available data, the classification criteria are not met.

**Product Skin Corrosion/Irritation Data**
No data available.

**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 |
|---|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | Standard Draize Test | Human | 1000 mg | None reported | Mild skin irritant | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | Standard Draize Test | Rabbit | 500 mg | 4 hours | Not corrosive or irritating to skin | ECHA (The European Chemicals Agency) |

**Serious eye damage/irritation**
Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

**Product Serious Eye Damage/Eye Irritation Data**
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 |
|---|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | Rinse Test | Rabbit | 100 mg | None reported | Corrosive to eyes | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium metabisulfite (3 - 7%) CAS#: 7681-57-4 | Standard Draize Test | Rabbit | 107 mg | None reported | Corrosive to eyes | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | Standard Draize Test | Rabbit | 162 mg | None reported | Mild eye irritant | ECHA (The European Chemicals Agency) |

**Respiratory or skin sensitization**
May cause sensitization by inhalation.

**Product Sensitization Data**
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 |
|---|---|---|---|---|
| N,N-Dimethylformami | OECD Test No. | Guinea pig | Not confirmed to be a skin sensitizer | IUCLID (The International Uniform |

| | | | | |
|---|---|---|---|---|
| de<br>(20 - 30%)<br>CAS#: 68-12-2 | 406: Skin Sensitization | | | Chemical Information Database) |

**Respiratory Sensitization Exposure Route**

| Chemical name | Test method | Species | Results | Key literature references and sources for data |
|---|---|---|---|---|
| Sodium metabisulfite<br>(3 - 7%)<br>CAS#: 7681-57-4 | Based on human experience | Human | Confirmed to be a respiratory sensitizer | GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance) |
| Sodium sulfite<br>(1 - 5%)<br>CAS#: 7757-83-7 | Based on human experience | Human | Confirmed to be a respiratory sensitizer | OECD 429: Skin Sensitization: Local Lymph Node Assay |

**STOT - single exposure**
Based on available data, the classification criteria are not met.

**Product Specific Target Organ Toxicity Single Exposure Data**
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.

**Product Specific Target Organ Toxicity Repeat Dose Data**
No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure 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 metabisulfite<br>(3 - 7%)<br>CAS#: 7681-57-4 | Rat<br>$TD_{Lo}$ | 75 mg/kg | 15 days | **Biochemical**<br>Enzyme inhibition, induction, or change in blood or tissue levels (phosphatases and dehydrogenases)<br>**Kidney, Ureter, or Bladder**<br>Other changes in urine composition | RTECS (Registry of Toxic Effects of Chemical Substances) |

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

**Product Carcinogenicity Data**
No data available.

**Ingredient Carcinogenicity Data**
No data available.

| Chemical name | CAS No | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|---|
| N,N-Dimethylformamide | 68-12-2 | A3 | Group 2A | - | X |
| Sodium metabisulfite | 7681-57-4 | - | Group 3 | - | - |
| Sodium sulfite | 7757-83-7 | - | Group 3 | - | - |

**Legend**

| | |
|---|---|
| **ACGIH (American Conference of Governmental Industrial Hygienists)** | Does not apply |
| **IARC (International Agency for Research on Cancer)** | Group 3 - Not classifiable as a human carcinogen<br>Group 2A - Probably Carcinogenic to Humans |
| **NTP (National Toxicology Program)** | Does not apply |
| **OSHA (Occupational Safety and Health Administration of the US Department of Labor)** | X - Present |

**Germ cell mutagenicity**
Based on available data, the classification criteria are not met.

**Product Germ Cell Mutagenicity** *invitro* **Data**
No data available.

**Ingredient Germ Cell Mutagenicity** *invitro* **Data**
Test data reported below.

| Chemical name | Test | Cell Strain | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | Mutation in microorganisms | *Salmonella typhimurium* | None reported | None reported | Negative test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium metabisulfite (3 - 7%) CAS#: 7681-57-4 | Cytogenetic analysis | Hamster ovary | 0.18 mg/L | None reported | Positive test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | Cytogenetic analysis | Mouse sperm cells | 25 mg/L | None reported | Positive test result for mutagenicity | RTECS (Registry of Toxic Effects of Chemical Substances) |

**Product Germ Cell Mutagenicity** *invivo* **Data**
No data available.

**Ingredient Germ Cell Mutagenicity** *invivo* **Data**
No data available.

**Reproductive toxicity**
Classification based on data available for ingredients. Contains a known or suspected reproductive toxin. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

**Product Reproductive Toxicity Data**
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 |
|---|---|---|---|---|---|
| Sodium metabisulfite (3 - 7%) CAS#: 7681-57-4 | Rat $TD_{Lo}$ | 20000 mg/kg | None reported | **Effects on Newborn** Stillbirth | RTECS (Registry of Toxic Effects of Chemical Substances) |

**Inhalation (Vapor) Exposure Route**

| Chemical name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | Mouse $TD_{Lo}$ | 50 mg/L | 6 hours | **Paternal Effects** Spermatogenesis (including genetic material, sperm morphology, motility, and count) | RTECS (Registry of Toxic Effects of Chemical Substances) |

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

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

**Unknown aquatic toxicity** 0.01 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

**Product Ecological Data**

**Aquatic Acute Toxicity**
No data available.

**Aquatic Chronic Toxicity**
No data available.

**Ingredient Ecological Data**

**Aquatic Acute Toxicity**
Test data reported below.

**Fish**

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | 96 hours | *Lepomis macrochirus* | $LC_{50}$ | 7100 mg/L | PEEN (Pan European Ecological Network) |
| Sodium metabisulfite (3 - 7%) CAS#: 7681-57-4 | 96 hours | *Salmo gairdneri* | $LC_{50}$ | 15 mg/L | IUCLID (The International Uniform Chemical Information Database) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | 96 hours | *Leuciscus idus* | $LC_{50}$ | 170 mg/L | OECD 429: Skin Sensitization: Local Lymph Node Assay |

**Crustacea**

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | 48 Hours | *Daphnia magna* | $EC_{50}$ | 7500 mg/L | PEEN (Pan European Ecological Network) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | 48 Hours | *Daphnia magna* | $EC_{50}$ | 18 mg/L | OECD 429: Skin Sensitization: Local Lymph Node Assay |

**Algae**

| Chemical name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | 96 hours | *Scenedesmus subspicatus* | $EC_{50}$ | > 500 mg/L | PEEN (Pan European Ecological Network) |
| Sodium metabisulfite (3 - 7%) CAS#: 7681-57-4 | 96 hours | *Scenedesmus subspicatus* | $EC_{50}$ | 40 mg/L | IUCLID (The International Uniform Chemical Information Database) |
| Sodium sulfite (1 - 5%) CAS#: 7757-83-7 | None reported | *Chlamydomonas reinhardtii* | $EC_{50}$ | 63 mg/L | OECD 429: Skin Sensitization: Local Lymph Node Assay |

**Aquatic Chronic Toxicity**
No data available.

**Persistence and degradability**

**Product Biodegradability Data**
No data available.

Bioaccumulation
There is no data for this product
**Product Bioaccumulation Data**
No data available.

**Partition Coefficient (n-octanol/water)** Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

**Other adverse effects**
No information available

| Chemical name | EU - Endocrine Disrupters Candidate List | EU - Endocrine Disrupters - Evaluated Substances | Endocrine disrupting potential |
|---|---|---|---|
| N,N-Dimethylformamide (20 - 30%) CAS#: 68-12-2 | Group III Chemical | - | - |

## 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

**Special instructions for disposal** Incinerate material at an E.P.A. approved hazardous waste facility.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

| | |
|---|---|
| **TDG** | Not regulated |
| **IATA** | Not regulated |
| **IMDG** | Not regulated |
| **Note:** | No special precautions necessary. |

**Additional information**

## 15. REGULATORY INFORMATION

**National Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

| | |
|---|---|
| **EINECS/ELINCS** | Complies |
| **ENCS** | Complies |
| **IECSC** | Complies |
| **KECL - Existing substances** | Complies |
| **PICCS** | Complies |
| **TCSI** | Complies |
| **AICS** | Complies |
| **NZIoC** | 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 contains a chemical or 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 % |
|---|---|
| N,N-Dimethylformamide (CAS #: 68-12-2) | 0.1 |

**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)

**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) |
|---|---|---|---|
| N,N-Dimethylformamide<br>68-12-2 | 100 lb | - | RQ 100 lb final RQ<br>RQ 45.4 kg final RQ |

## US State Regulations

**California Proposition 65**
This product contains the following Proposition 65 chemicals

| Chemical name | California Proposition 65 |
|---|---|
| N,N-Dimethylformamide (CAS #: 68-12-2) | Carcinogen |

**WARNING:** This product can expose you to chemicals including N,N-Dimethylformamide, which is known to the State of California to cause cancer.
For more information, go to http://www.P65Warnings.ca.gov

**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 |
|---|---|---|---|
| N,N-Dimethylformamide<br>68-12-2 | X | X | X |
| Sodium metabisulfite<br>7681-57-4 | X | X | X |

**U.S. EPA Label Information**

| Chemical name | FIFRA | FDA |
|---|---|---|
| Sodium metabisulfite | - | 21 CFR 182.3766 |
| Sodium sulfite | 180.0910 | 21 CFR 182.3798 |

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

**Special Comments**
None

**Additional information**

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

| Chemical name | Global Automotive Declarable Substance List Classifications | Global Automotive Declarable Substance List Thersholds |
|---|---|---|
| N,N-Dimethylformamide<br>68-12-2 | Prohibited Substance (LR)<br>Declarable Substance (LR) | 0.3 % |
| Sodium metabisulfite<br>7681-57-4 | Declarable Substance (LR)<br>Prohibited Substance (LR) | 0 % |

| | | |
|---|---|---|
| Sodium sulfite<br>7757-83-7 | Declarable Substance (LR)<br>Prohibited Substance (LR) | 0 % |

**NFPA and HMIS Classifications**

| | | | | |
|---|---|---|---|---|
| **NFPA** | **Health hazards** - 3 | **Flammability** - 1 | **Instability** - 0 | **Physical and chemical properties** - |
| **HMIS** | **Health hazards** - *<br>- 2 | **Flammability** - 1 | **Physical hazards** - 0 | **Personal protection** -<br>X<br>- I |

**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 regulations. |
| SKN* | Skin designation | SKN+ | Skin sensitization |
| RSP+ | Respiratory sensitization | ** | Hazard Designation |
| C | Carcinogen | R | Reproductive toxicant |
| M | mutagen | | |

| | |
|---|---|
| **Prepared By** | Hach Product Compliance Department |
| **Issue Date** | 14-Dec-2020 |
| **Revision Date** | 10-Aug-2021 |
| **Revision Note** | None |

**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.**



**End of Safety Data Sheet**