



Be Right™

SAFETY DATA SHEET

Issue Date 20-May-2016

Revision Date 31-Aug-2016

Version 3

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1. IDENTIFICATION

Product identifier

Product Name NitriVer ® 3 Nitrite Reagent

Other means of identification

Product Code(s)

1407899

Safety data sheet number

M00055

Component of Kits or Sets

1407828; 1408100; 1408100RGT; 1416100; 1416100RGT; 2182000; 2182000RGT; 243001; 243001RGT; 243002; 243002RGT; 243003; 243003RGT; 2460800; 2482100; 2482200; 2712000; 2712000RGT

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent. Determination of nitrite.

Uses advised against None.

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
(970) 669-3050

Emergency telephone number

(303) 623-5716 - 24 Hour Service (515)232-2533 - 8am - 4pm CST

Product Information

Chemical Name Not applicable

Formula Not applicable

CAS No Not applicable

Alternate CAS Number Not applicable

NIOSH (RTECS) Number None reported

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

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

| | |
|-----------------------------------|-------------|
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Skin sensitization | Category 1 |

Hazards not otherwise classified (HNOC)

Not applicable

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Label elements

Signal word - Warning



Hazard statements

H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H317 - May cause an allergic skin reaction

Precautionary statements

P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P272 - Contaminated work clothing should not be allowed out of the workplace
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P362 - Take off contaminated clothing and wash before reuse
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Mixture

Chemical Family Mixture.

Percent ranges are used where confidential product information is applicable.

| Chemical Name | CAS No | Percent Range | HMRIC # |
|------------------------------------------------------------------------|------------|---------------|---------|
| Phosphoric acid, potassium salt (1:1) | 7778-77-0 | 50 - 100 | - |
| Potassium pyrosulfate | 7790-62-7 | 5 - 10 | - |
| Benzenesulfonic acid, 4-amino-, monosodium salt | 515-74-2 | 5 - 10 | - |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt | 129-96-4 | 1 - 5 | - |
| Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt | 36679-96-6 | 1 - 5 | - |

4. FIRST AID MEASURES

Description of first aid measures

| | |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice | In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician. |
| Skin contact | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. |
| Inhalation | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician. |
| Ingestion | IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician. |
| Self-protection of the first aider | Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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.

Flammable properties

During a fire, this product decomposes to form toxic gases.

Specific hazards arising from the chemical

None reported.

Hazardous combustion products No information available.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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. |
| EC 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. |

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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, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Avoid release to the environment. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

Emergency Response Guide Number Not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Flammability class Not applicable

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

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

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye/face protection | Wear tight sealing safety goggles and/or face protection shield. |
| Skin and body protection | Wear protective gloves and protective clothing. |
| Respiratory protection | In case of insufficient ventilation, wear suitable respiratory equipment. |
| General Hygiene Considerations | Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended. |

Environmental exposure controls

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|---------------------------|------------------------------------------|
| Physical state | Solid |
| Gas Under Pressure | Not classified according to GHS criteria |
| Appearance powder | Color white |
| Odor Odorless | Odor threshold No data available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------------------------------|----------------------|--------------------------------|
| Molecular weight | No data available | |
| pH | 3.2 | 5% Solution |
| Melting point/freezing point | 224 °C / 435 °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) | 3.12 | |
| Partition Coefficient (n-octanol/water) | No data available | |
| Soil Organic Carbon-Water Partition Coefficient | No data available | |
| Autoignition temperature | No data available | |
| Decomposition temperature | No data available | |
| Dynamic viscosity | Not applicable | |
| Kinematic viscosity | Not applicable | |

Solubility(ies)

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Water solubility

| <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> |
|----------------------|----------------------------------|-------------------|-------------------------------|
| None reported | No information available | No data available | No information available |

Other Information

| | |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Metal Corrosivity | Not classified as corrosive to metal according to GHS criteria |
| Steel Corrosion Rate | 1.45 mm/yr / 0.06 in/yr |
| Aluminum Corrosion Rate | |
| Volatile Organic Compounds (VOC) Content | Not applicable. |
| Bulk density | No data available |
| Explosive properties | Not classified according to GHS criteria. |
| Explosion data | No data available |
| Upper explosion limit | No data available |
| Lower explosion limit | No data available |
| Flammable properties | During a fire, this product decomposes to form toxic gases. |
| Flammability Limit in Air | |
| Upper flammability limit: | No data available |
| Lower flammability limit: | No data available |
| Flash point | Not applicable |
| Method | No information available |
| Oxidizing properties | Not classified according to GHS criteria. |
| Reactivity properties | Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria. |

10. STABILITY AND REACTIVITY

Reactivity properties

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability

Stable under recommended storage conditions.

Special dangers of the product

None reported

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Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid

Excess moisture. Extreme temperatures.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Phosphorus oxides. Carbon dioxide. Carbon monoxide. sodium oxides.

Explosive properties

Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature

No data available

Sensitivity to Static Discharge

None reported

Sensitivity to Mechanical Impact

None reported

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

| | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Product Information | Causes skin irritation. Harmful if swallowed. Causes serious eye irritation. Skin sensitizer. |
| Inhalation | No known effect based on information supplied. |
| Eye contact | Severely irritating to eyes. |
| Skin contact | Causes skin irritation. May cause sensitization by skin contact. |
| Ingestion | Harmful if swallowed. Ingestion may cause irritation to mucous membranes. |
| Aggravated Medical Conditions | Skin disorders. Eye disorders. |
| Toxicologically synergistic products | None known. |
| Toxicokinetics, metabolism and distribution | See ingredients information below. |

| Chemical Name | Toxicokinetics, metabolism and distribution |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Sulfanilic acid is actively transported from the blood of rats and guinea-pigs into mucosa cells of the small intestine, partly metabolized, and then secreted into the lumen of the small intestine. |

Product Acute Toxicity Data

Oral Exposure Route No data available

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Dermal Exposure Route No data available
 Inhalation (Dust/Mist) Exposure Route No data available
 Inhalation (Vapor) Exposure Route No data available
 Inhalation (Gas) Exposure Route No data available

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

| | |
|---------------|--------------|
| ATEmix (oral) | 622.00 mg/kg |
|---------------|--------------|

Ingredient Acute Toxicity Data

Oral Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|-----------------------------------------------------------------------------------------|------------------------|---------------|---------------|-----------------------|------------------------------------------------------------------|
| Phosphoric acid, potassium salt (1:1) (50 - 100) CAS#: 7778-77-0 | Rat LD ₅₀ | 2820 mg/kg | None reported | None reported | HSDB (Hazardous Substances Data Bank) |
| Potassium pyrosulfate (5 - 10) CAS#: 7790-62-7 | Rat LD ₅₀ | 2340 mg/kg | None reported | None reported | Vendor SDS |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Rat LD ₅₀ | 12300 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information Database) |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt (1 - 5) CAS#: 129-96-4 | Rat LD ₅₀ | > 5000 mg/kg | None reported | None reported | Vendor SDS |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Phosphoric acid, potassium salt (1:1) (50 - 100) CAS#: 7778-77-0 | Mouse LD ₅₀ | 1700 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information Database) |

Dermal Exposure Route

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---------------------------------------------------------------------|-------------------------|---------------|---------------|-----------------------|------------------------------------------------|
| Phosphoric acid, potassium salt (1:1) (50 - 100) CAS#: 7778-77-0 | Rabbit LD ₅₀ | > 4640 mg/kg | None reported | None reported | ChemADVISOR |

Inhalation (Dust/Mist) Exposure Route No data available
 Inhalation (Vapor) Exposure Route No data available
 Inhalation (Gas) Exposure Route No data available

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|-----------------------------------------------------------------------------------------|---------------------------|---------|---------------|---------------|-------------------------------------|------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Patch test | Rabbit | None reported | None reported | Skin irritant | No information available |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt (1 - 5) CAS#: 129-96-4 | Existing human experience | Human | None reported | None reported | Skin irritant | No information available |
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Patch 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

| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------|---------------|---------------|-------------------|------------------------------------------------|
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt (1 - 5) CAS#: 129-96-4 | Existing human experience | Human | None reported | None reported | Eye irritant | No information available |
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Organization for Economic Co-operation and Development (OECD) - Test 405: Acute Eye Corrosion/Irritation | Rabbit | 41 mg | 24 hours | Mild eye irritant | ECHA (The European Chemicals Agency) |

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route

No data available.

Respiratory Sensitization Exposure Route

No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route

| Chemical Name | Test method | Species | Results | Key literature references and sources for data |
|----------------------------------------------------------------------------|---------------------------------------|------------|-----------------------------------|------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | OECD Test No. 406: Skin Sensitization | Guinea pig | Confirmed to be a skin sensitizer | IUCLID (The International Uniform Chemical Information Database) |

Respiratory Sensitization Exposure Route

No data available.

Chronic Toxicity Information

Product Repeat Dose Toxicity Data

Oral Exposure Route

No data available.

Dermal Exposure Route

No data available.

Inhalation (Dust/Mist) Exposure Route

No data available.

Inhalation (Vapor) Exposure Route

No data available.

Inhalation (Gas) Exposure Route

No data available.

Ingredient Repeat Dose Toxicity Data

Oral Exposure Route

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

| Chemical Name | CAS No | ACGIH | IARC | NTP | OSHA |
|------------------------------------------------------------------------|------------|-------|------|-----|------|
| Phosphoric acid, potassium salt (1:1) | 7778-77-0 | - | - | - | - |
| Potassium pyrosulfate | 7790-62-7 | - | - | - | - |
| Benzenesulfonic acid, 4-amino-, monosodium salt | 515-74-2 | - | - | - | - |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt | 129-96-4 | - | - | - | - |
| Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt | 36679-96-6 | - | - | - | - |

Legend

| | |
|--------------------------------------------------------------------------|----------------|
| ACGIH (American Conference of Governmental Industrial Hygienists) | Does not apply |
| IARC (International Agency for Research on Cancer) | Does not apply |
| NTP (National Toxicology Program) | Does not apply |

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| | |
|------------------------------------------------------------------------------------|-------------|
| OSHA (Occupational Safety and Health Administration of the US Department of Labor) | X - Present |
|------------------------------------------------------------------------------------|-------------|

Product Carcinogenicity Data No data available

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Carcinogenicity Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Product Germ Cell Mutagenicity *invitro* Data

No data available.

Ingredient Germ Cell Mutagenicity *invitro* Data

| Chemical Name | Test | Cell Strain | Reported dose | Exposure time | Results | Key literature references and sources for data |
|----------------------------------------------------------------------------|----------------------------|-------------------------------|---------------|---------------|---------------------------------------|------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Mutation in microorganisms | <i>Salmonella typhimurium</i> | None reported | None reported | Negative test result for mutagenicity | IUCLID (The International Uniform Chemical Information Database) |

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

Inhalation (Gas) Exposure Route No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

Inhalation (Vapor) Exposure Route No data available

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Inhalation (Gas) Exposure Route No data available
 Oral Exposure Route No data available
 Dermal Exposure Route No data available
 Inhalation (Dust/Mist) Exposure Route No data available
 Inhalation (Vapor) Exposure Route No data available
 Inhalation (Gas) Exposure Route No data available
Ingredient Reproductive Toxicity Data
 Oral Exposure Route No data available
 Dermal Exposure Route No data available
 Inhalation (Dust/Mist) Exposure Route No data available
 Inhalation (Vapor) Exposure Route No data available
 Inhalation (Gas) Exposure Route No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

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

Terrestrial toxicity

Soil No data available
Vertebrates No data available
Invertebrates No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

| Chemical Name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|-------------------------------------------------------------|---------------|----------------------------|------------------|---------------|------------------------------------------------------------------|
| Potassium pyrosulfate (5 - 10) CAS#: 7790-62-7 | 96 hours | <i>Oncorhynchus mykiss</i> | LC ₅₀ | 420 mg/L | ERMA (New Zealand's Environmental Risk Management Authority) |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) | 96 hours | <i>Pimephales promelas</i> | LC ₅₀ | 100 mg/L | IUCLID (The International Uniform Chemical Information Database) |

| | | | | | |
|-----------------------------------------------------------------------------------------------------|----------|---------------|------------------|-------------|-----------------------------------------------------------------------------------------|
| CAS#: 515-74-2 | | | | | |
| Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | 96 hours | None reported | LC ₅₀ | 356000 mg/L | Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™ |

Crustacea

| Chemical Name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|-----------------------------------------------------------------------------------------------------|---------------|----------------------|------------------|---------------|-----------------------------------------------------------------------------------------|
| Potassium pyrosulfate (5 - 10) CAS#: 7790-62-7 | 48 Hours | <i>Daphnia magna</i> | EC ₅₀ | 140 mg/L | ERMA (New Zealand's Environmental Risk Management Authority) |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | 48 Hours | <i>Daphnia magna</i> | EC ₅₀ | 86 mg/L | IUCLID (The International Uniform Chemical Information Database) |
| Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | 48 Hours | None reported | EC ₅₀ | 26162 mg/L | Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™ |

Algae

| Chemical Name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|-----------------------------------------------------------------------------------------------------|---------------|--------------------------------|------------------|---------------|-----------------------------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | 72 Hours | <i>Scenedesmus subspicatus</i> | EC ₅₀ | 375 mg/L | IUCLID (The International Uniform Chemical Information Database) |
| Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | 96 hours | None reported | EC ₅₀ | 56103 mg/L | Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™ |

Terrestrial toxicity

| | |
|----------------------|-------------------|
| Soil | No data available |
| Vertebrates | No data available |
| Invertebrates | No data available |

Other Information

Persistence and degradability

None known.

Product Biodegradability Data

If available, see ingredient data below.

Ingredient Biodegradability Data

Test data reported below

| Chemical Name | Test method | Biodegradation | Exposure time | Results |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------|---------------|---------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D) | 97% | 28 days | Readily biodegradable |
| Glycine, N,N-1,2-cyclohexane diylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | None reported | None reported | None reported | Not readily biodegradable |

Bioaccumulation

None known.

Product Bioaccumulation Data

No data available.

Ingredient Bioaccumulation Data

No data available

Additional information

Product Information

No data available

Partition Coefficient (n-octanol/water)

No data available

Ingredient Information

| Chemical Name | Partition Coefficient (n-octanol/water) | Method |
|---------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | log K _{ow} = -3.87 | Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™ |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt (1 - 5) CAS#: 129-96-4 | log K _{ow} = -1.87 | Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™ |
| Glycine, N,N-1,2-cyclohexanedylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | log K _{ow} = -11 | Estimation through KOWWIN v1.68 part of the Estimation Programs Interface (EPI) Suite™ |

Mobility

Mobility in soil: Moderate to high mobility. If available, see ingredient data below.

Product Information

No data available

Soil Organic Carbon-Water Partition Coefficient

No data available

Ingredient Information

| Chemical Name | Soil Organic Carbon-Water Partition Coefficient | Method |
|---------------|-------------------------------------------------|--------|
|---------------|-------------------------------------------------|--------|

| | | |
|-------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------|
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | log K _{oc} = 0.68 | Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™ |
| Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | log K _{oc} = 2.24 | Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™ |

Additional information

Water solubility

Product Information

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

Ingredient Information

| <u>Chemical Name</u> | <u>Water solubility classification</u> | <u>Water solubility</u> | <u>Water solubility temperature °C</u> | <u>Water solubility temperature °F</u> |
|-------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------|----------------------------------------|----------------------------------------|
| Phosphoric acid, potassium salt (1:1) (50 - 100) CAS#: 7778-77-0 | Soluble | > 1000 mg/L | 25 °C | 77 °F |
| Potassium pyrosulfate (5 - 10) CAS#: 7790-62-7 | Completely soluble | 25000 mg/L | 20 °C | 68 °F |
| Benzenesulfonic acid, 4-amino-, monosodium salt (5 - 10) CAS#: 515-74-2 | Completely soluble | > 20000 mg/L | 20 °C | 68 °F |
| 2,7-Naphthalenedisulfonic acid, 4,5-dihydroxy-, disodium salt (1 - 5) CAS#: 129-96-4 | Soluble | > 1000 mg/L | 25 °C | 77 °F |
| Glycine, N,N-1,2-cyclohexanediylbis[N-(carboxymethyl)-, trisodium salt (1 - 5) CAS#: 36679-96-6 | Soluble | > 1000 mg/L | 50 °C | 122 °F |

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Contaminated packaging

Working in a well-ventilated area. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state, or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous.

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and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Special instructions for disposal If permitted by regulation. Dilute material with excess water making a weaker than 5% solution. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain. Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

14. TRANSPORT INFORMATION

| | |
|--------------|-----------------------------------|
| DOT | 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

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 | Complies |
| PICCS | Does not comply |
| TCSI | Complies |
| AICS | Does not comply |
| 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

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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

SARA 311/312 Hazard Categories

| | |
|------------------------------------------|----|
| Acute health hazard | No |
| Chronic Health Hazard | No |
| 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

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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

NFPA and HMIS Classifications

| NFPA | Health hazards - 2 | Flammability - 0 | Instability - 0 | Physical and Chemical Properties - |
|-------------|---------------------------|-------------------------|-----------------------------|------------------------------------------------------------------------|
| HMIS | Health hazards - 2 | Flammability - 0 | Physical hazards - 0 | Personal protection - X - See section 8 for more information |

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

| | |
|-------------------|--------------------------------------------------------------------------|
| <i>NIOSH IDLH</i> | <i>Immediately Dangerous to Life or Health</i> |
| <i>ACGIH</i> | <i>ACGIH (American Conference of Governmental Industrial Hygienists)</i> |
| <i>NDF</i> | <i>no data</i> |

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 |

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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 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.

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End of Safety Data Sheet