



Be Right™

SAFETY DATA SHEET

Issue Date 07-Sep-2016

Revision Date 28-Sep-2016

Version 4

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1. IDENTIFICATION

Product identifier

Product Name Sulfamic Acid

Other means of identification

Product Code(s) 105599

Safety data sheet number M00007

UN/ID no UN2967

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

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

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

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

| | |
|-----------------------------------|-------------|
| Corrosive to metals | Category 1 |
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Aquatic Acute Toxicity | Category 3 |
| Chronic aquatic toxicity | Category 3 |

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word - Warning

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Hazard statements

H290 - May be corrosive to metals
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

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
P273 - Avoid release to the environment
P234 - Keep only in original container
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
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P390 - Absorb spillage to prevent material damage
P406 - Store in corrosive resistant stainless steel container with a resistant liner
P501 - Dispose of contents/ container to an approved waste disposal plant

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

| Chemical Name | CAS No | Percent Range | HMRIC # |
|---------------|-----------|---------------|---------|
| Sulfamic acid | 5329-14-6 | >99% | - |

4. FIRST AID MEASURES

Description of first aid measures

| | |
|---|--|
| General advice | IF IN EYES: Flush eyes for at least 15 minutes. May cause skin irritation. |
| Eye contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Skin contact | For minor skin contact, avoid spreading material on unaffected skin. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Call a POISON CENTER or doctor if you feel unwell. If skin irritation persists, call a physician. |
| Inhalation | IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician. |
| Ingestion | Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Remove from exposure, lie down. Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting without medical advice. |
| 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, irritating and highly toxic gases may be generated by thermal decomposition. Material is not classified as flammable according to GHS criteria.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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.

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 Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. 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 necessary precautions in observance of pertinent physical hazards. 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 Absorb spillage to prevent material damage.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Flammability class Not applicable

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. Avoid contact with eyes.

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended. Handle in accordance with good industrial hygiene and safety practice. Avoid prolonged or repeated contact with skin. Take off all contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. 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 crystalline **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 | No data available | |
| Melting point/freezing point | No data available | |
| Boiling point / boiling range | No data available | |
| Evaporation rate | Not applicable | |
| Vapor pressure | Not applicable | |
| Vapor density (air = 1) | Not applicable | |
| Specific gravity (water = 1 / air = 1) | 2.15 | |
| Partition Coefficient (n-octanol/water) | No data available | |
| Soil Organic Carbon-Water Partition Coefficient | No data available | |

| | |
|----------------------------------|-------------------|
| Autoignition temperature | No data available |
| Decomposition temperature | 205 °C / 401 °F |
| Dynamic viscosity | Not applicable |
| Kinematic viscosity | Not applicable |

Solubility(ies)

Water solubility

| <u>Water solubility classification</u> | <u>Water solubility</u> | <u>Water Solubility Temperature</u> |
|--|-------------------------|-------------------------------------|
| Soluble | > 1000 mg/L | 80 °C / 176 °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 |
| Methanol | Slightly soluble | > 0.1 mg/L | 25 °C / 77 °F |
| Ethyl alcohol | Slightly soluble | > 0.1 mg/L | 25 °C / 77 °F |

Other Information

| | |
|---|--|
| Metal Corrosivity | Classified as corrosive to metal according to GHS criteria |
| GHS Metal Corrosivity Classification | Category 1, H290 |
| Steel Corrosion Rate | 20.68 mm/yr / 0.81 in/yr |
| Aluminum Corrosion Rate | 5.38 mm/yr / 0.21 in/yr |
| 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, irritating and highly toxic gases may be generated by thermal decomposition. Material is not classified as flammable according to GHS criteria. |
| Flammability Limit in Air | |
| Upper flammability limit: | No data available |
| Lower flammability limit: | No data available |
| Flash point | Not applicable |
| Oxidizing properties | Not classified according to GHS criteria. |
| Reactivity properties | Not classified as self-reactive, pyrophoric, self-heating or emitting |

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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

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Extremes of temperature and direct sunlight. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

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

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

NIOSH (RTECS) Number

None reported

Information on Likely Routes of Exposure

| | |
|----------------------------|--|
| Product Information | Causes skin irritation. Causes serious eye irritation. Harmful if swallowed. |
| Inhalation | No known effect based on information supplied. |
| Eye contact | Severely irritating to eyes. |
| Skin contact | Causes skin irritation. |
| 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 | No information available. |

Product Acute 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 |

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

| | |
|----------------------|----------------|
| ATEmix (oral) | 1,456.00 mg/kg |
|----------------------|----------------|

Ingredient Acute Toxicity Data

Oral Exposure Route

If available, see data below

| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
|---|-----------------------------|---------------|---------------|-----------------------|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Rat LD ₅₀ | 1450 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information Database) |
| Chemical Name | Endpoint type | Reported dose | Exposure time | Toxicological effects | Key literature references and sources for data |
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Guinea pig LD ₅₀ | 1050 mg/kg | None reported | None reported | IUCLID (The International Uniform Chemical Information Database) |

| | |
|---------------------------------------|-------------------|
| 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 Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

If available, see data below

| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|----------------------|---------|---------------|---------------|--------------------|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Standard Draize Test | Human | 40 mg | 5 days | Mild skin irritant | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |

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| | | | | | | |
|---|----------------------|--------|--------|----------|-------------------|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Standard Draize Test | Rabbit | 500 mg | 24 hours | Corrosive to skin | RTECS (Registry of Toxic Effects of Chemical Substances) |
|---|----------------------|--------|--------|----------|-------------------|--|

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

If available, see data below

| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
|---|----------------------|---------|---------------|---------------|-------------------|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Standard Draize Test | Rabbit | 20 mg | None reported | Eye irritant | RTECS (Registry of Toxic Effects of Chemical Substances) |
| Chemical Name | Test method | Species | Reported dose | Exposure time | Results | Key literature references and sources for data |
| Sulfamic acid (>99%) CAS#: 5329-14-6 | Standard Draize Test | Rabbit | 0.250 mg | 24 hours | Corrosive to eyes | RTECS (Registry of Toxic Effects of Chemical Substances) |

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 No data available.

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

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| Chemical Name | CAS No | ACGIH | IARC | NTP | OSHA |
|---------------|-----------|-------|------|-----|------|
| Sulfamic acid | 5329-14-6 | - | - | - | - |

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 |
| OSHA (Occupational Safety and Health Administration of the US Department of Labor) | Does not apply |

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 *in vitro* Data

No data available.

Ingredient Germ Cell Mutagenicity *in vitro* 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 Germ Cell Mutagenicity *in vivo* Data

Oral Exposure Route No data available

Dermal Exposure Route No data available

Inhalation (Dust/Mist) Exposure Route No data available

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Inhalation (Vapor) Exposure Route No data available
 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 Harmful to aquatic life with long lasting effects.

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

If available, see ingredient data below

| Chemical Name | Exposure time | Species | Endpoint type | Reported dose | Key literature references and sources for data |
|---|---------------|----------------------------|------------------|---------------|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | 96 hours | <i>Pimephales promelas</i> | LC ₅₀ | 42.2 mg/L | ERMA (New Zealand's Environmental Risk Management Authority) |

Crustacea

If available, see ingredient data below

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Algae

If available, see ingredient data below

Terrestrial toxicity

Soil

No data available

Vertebrates

No data available

Invertebrates

No data available

Other Information

Persistence and degradability

None known.

Product Biodegradability Data

No data available.

Ingredient Biodegradability Data

No data available

Bioaccumulation

If available, see ingredient data below.

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 |
|---|---|--------------------------|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | log K _{ow} = .? | No information available |

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 |
|---|---|--|
| Sulfamic acid (>99%) CAS#: 5329-14-6 | log K _{oc} = .? | Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™ |

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Additional information

Water solubility

Product Information

| <u>Water solubility classification</u> | <u>Water solubility</u> | <u>Water Solubility Temperature</u> |
|--|-------------------------|-------------------------------------|
| Soluble | > 1000 mg/L | 80 °C / 176 °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> |
|----------------------------------|--|-------------------------|--|--|
| Sulfamic acid CAS#: 5329-14-6 | Completely soluble | 213000 mg/L | 20 °C | 68 °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 | Do not reuse container. |
| US EPA Waste Number | D002 |

14. TRANSPORT INFORMATION

U.S. DOT

| | |
|-----------------------------|----------------|
| UN/ID no | UN2967 |
| Proper shipping name | Sulphamic Acid |
| Hazard Class | 8 |
| Subsidiary class | NA |
| Packing Group | III |

TDG

| | |
|-----------------------------|----------------|
| UN/ID no | UN2967 |
| Proper shipping name | Sulphamic Acid |
| Hazard Class | 8 |
| Subsidiary class | NA |
| Packing Group | III |

IATA

| | |
|--------------------------------|----------------|
| UN/ID no | UN2967 |
| Proper shipping name | Sulphamic Acid |
| Hazard Class | 8 |
| Subsidiary hazard class | NA |
| Packing Group | III |

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IMDG

| | |
|--------------------------------|----------------|
| UN/ID no | UN2967 |
| Proper shipping name | Sulphamic Acid |
| Hazard Class | 8 |
| Subsidiary hazard class | NA |
| Packing Group | III |

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 | 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 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 | 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)

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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

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Sulfamic acid 5329-14-6 | X | - | - |

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

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 - 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

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 |

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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 07-Sep-2016

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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.

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.

HACH COMPANY©2017

End of Safety Data Sheet