



SAFETY DATA SHEET

SULFITE INDICATOR, ACID-STARCH

1. Identification

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| Product identifier | SULFITE INDICATOR, ACID-STARCH |
| Other means of identification | None. |
| Version # | 1.1 |
| Prepared by | This SDS has been prepared by SUEZ Regulatory Department (1-215-355-3300). |
| L code | L6091 |
| Revision date | Dec-25-2017 |
| Supersedes date | May-05-2017 |
| Recommended use | Field test reagent |
| Recommended restrictions | None known. |

Company/undertaking identification

SUEZ Water Technologies & Solutions Canada
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Oakville, Ontario, L6M 4B2
T 905-465-3030

Emergency telephone

(800) 877-1940

2. Hazard(s) identification

| | | |
|-------------------------|-----------------------------------|------------|
| Physical hazards | Not classified. | |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 2 |

Label elements



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|---------------------------------|---|
| Signal word | Warning |
| Hazard statement | Causes skin irritation. Causes serious eye irritation. |
| Precautionary statement | |
| Prevention | Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves. |
| Response | IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. |
| Storage | Store away from incompatible materials. |
| Disposal | Dispose of waste and residues in accordance with local authority requirements. |
| Other hazards | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Components | CAS # | Percent (wt/wt) |
|----------------|-----------|-----------------|
| Sulphamic acid | 5329-14-6 | 90 - 100 |

Composition comments Information for specific product ingredients as required by the WHMIS Regulations is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| Ingestion | Rinse mouth. Get medical attention if symptoms occur. |
| Most important symptoms/effects, acute and delayed | Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. Fire-fighting measures

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| Suitable extinguishing media | Water spray. Foam. Powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | Do not use water jet as an extinguisher, as this will spread the fire. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. |
| Fire fighting equipment/instructions | In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | No unusual fire or explosion hazards noted. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. Water contaminated with this product may be sent to a sanitary sewer treatment facility, or a permitted waste treatment facility, in accordance with any local agreements. |

7. Handling and storage

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|---|---|
| Precautions for safe handling | Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
| Conditions for safe storage, including any incompatibilities | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). |

8. Exposure controls/personal protection

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| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Airtight chemical goggles. |
| Skin protection | |
| Hand protection | Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present. |
| Other | Wear appropriate chemical resistant clothing. |
| Respiratory protection | If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. |
| Thermal hazards | Wear appropriate thermal protective clothing, when necessary. |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

9. Physical and chemical properties

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|---|----------------------------|
| Appearance | Solid |
| Color | White |
| Odor | None |
| Odor threshold | Not available. |
| pH (concentrated product) | 2 |
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flash point | > 200 °F (> 93 °C) P-M(CC) |
| Evaporation rate | < 1 (Ether = 1) |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | (Air = 1) |
| Relative density | Not available. |
| Relative density temperature | 70 °F (21 °C) |
| Solubility(ies) | |
| Solubility (water) | < 5 % |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Viscosity temperature | 70 °F (21 °C) |

Other information

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|-----------------------------|----------------|
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

10. Stability and reactivity

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| Reactivity | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | Avoid temperatures exceeding the flash point. Contact with incompatible materials. Avoid contact with strong bases. |
| Incompatible materials | Bases. Strong oxidizing substances. |
| Hazardous decomposition products | Elemental oxides. |

11. Toxicological information

Information on likely routes of exposure

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|---------------------|---|
| Inhalation | Dust may cause irritation to upper respiratory tract. Prolonged inhalation may be harmful. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye irritation. |
| Ingestion | May cause slight gastrointestinal irritation with possible nausea, vomiting, abdominal discomfort and diarrhea. |

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity

| Product | Species | Test Results |
|--|----------------|--|
| SULFITE INDICATOR, ACID-STARCH (CAS Mixture) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg, (Calculated according to GHS additivity formula) |
| <i>Oral</i> | | |
| LD50 | Rat | 2253 mg/kg, (Calculated according to GHS additivity formula) |
| Components | Species | Test Results |
| Sulphamic acid (CAS 5329-14-6) | | |
| Acute | | |
| <i>Dermal</i> | | |
| LD50 | Rabbit | > 2000 mg/kg |
| <i>Oral</i> | | |
| LD50 | Rat | 2140 mg/kg |

* Estimates for product may be based on additional component data not shown.

| | |
|--|--|
| Skin corrosion/irritation | Causes skin irritation. |
| Serious eye damage/eye irritation | Causes serious eye irritation. |
| Respiratory or skin sensitization | |
| Respiratory sensitization | This product is not expected to cause respiratory sensitization. |
| Skin sensitization | This product is not expected to cause skin sensitization. |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| Carcinogenicity | Not classified. |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. |

| | |
|---|---|
| Specific target organ toxicity - single exposure | Not classified. |
| Specific target organ toxicity - repeated exposure | Not classified. |
| Aspiration hazard | Based on available data, the classification criteria are not met. |
| Chronic effects | Prolonged inhalation may be harmful. |

12. Ecological information

| | |
|--------------------------------------|--|
| Ecotoxicity | No ecotoxicity data noted for the ingredient(s). |
| Bioaccumulative potential | No data available. |
| Mobility in soil | No data available. |
| Other adverse effects | Not available. |
| Persistence and degradability | No data is available on the degradability of this product. |

13. Disposal considerations

| | |
|--|--|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. |
| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport information

TDG

| | |
|-----------------------------------|----------------|
| UN number | UN2967 |
| UN proper shipping name | SULFAMIC ACID |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | Not available. |

The goods described above have been classified using a combination of testing, technical data, calculations and manufacturer knowledge in accordance with Part 2, Classification. TDG Classification is valid for road or rail transport only. For shipment by air or water, refer to IATA or IMDG regulations.

DOT

| | |
|-------------------------------------|---|
| UN number | UN2967 |
| UN proper shipping name | SULFAMIC ACID |
| Transport hazard class(es) | |
| Class | 8 |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| ERG number | 154 |

Some containers may be exempt from Dangerous Goods/Hazmat Transport Regulations, please check BOL for exact container classification.

IMDG

| | |
|-------------------------------------|---|
| UN number | UN2967 |
| UN proper shipping name | SULPHAMIC ACID |
| Transport hazard class(es) | |
| Class | 8 |
| Subsidiary risk | - |
| Packing group | III |
| Environmental hazards | |
| Marine pollutant | No. |
| EmS | F-A, S-B |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |

IATA

| | |
|------------------|--------|
| UN number | UN2967 |
|------------------|--------|

UN proper shipping name Sulphamic acid
Transport hazard class(es)
Class 8
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 154
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

DOT



IATA; IMDG; TDG



15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

Inventory status

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date May-05-2017
Revision date Dec-25-2017
Version # 1.1

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
LC50: Lethal Concentration, 50%
LD50: Lethal Dose, 50%
TWA: Time Weighted Average
BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TLV: Threshold Limit Value

References:

No data available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.