Safety Data Sheet according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

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Revision: July 22, 2019

| 1 Identification | |
|--|--|
| · Product identifier | |
| Trade name: <u>Starch Acid Indicator Powder</u> Product code: NCST5205-E | |
| Recommended use and restriction on use Recommended use: Laboratory chemicals Restrictions on use: No relevant information available. | |
| Details of the supplier of the Safety Data Sheet Manufacturer/Supplier: AquaPhoenix Scientific, Inc. 860 Gitts Run Road Hanover, PA 17331 Phone: (717)632-1291 Toll-Free: (866)632-1291 info@aquaphoenixsci.com Distributor: Nashville Chemical 7001 Westbelt Drive Nashville, TN 37209 (615) 350-7070 | |
| Emergency telephone number: ChemTel Inc. (800)255-3924 (North America) +1 (813)248-0585 (International) | |
| | |
| 2 Hazard(s) identification | |
| 2 Hazard(s) identification · Classification of the substance or mixture | |
| Classification of the substance or mixture Met. Corr.1 H290 May be corrosive to metals. | |
| Classification of the substance or mixture Met. Corr.1 H290 May be corrosive to metals. Skin Corr. 1C H314 Causes severe skin burns and eye damage. | |
| Classification of the substance or mixtureMet. Corr.1H290 May be corrosive to metals.Skin Corr. 1CH314 Causes severe skin burns and eye damage.Eye Dam. 1H318 Causes serious eye damage. | |
| Classification of the substance or mixture Met. Corr.1 H290 May be corrosive to metals. Skin Corr. 1C H314 Causes severe skin burns and eye damage. | |
| Classification of the substance or mixtureMet. Corr.1H290 May be corrosive to metals.Skin Corr. 1CH314 Causes severe skin burns and eye damage.Eye Dam. 1H318 Causes serious eye damage. | |

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Trade name: Starch Acid Indicator Powder (Cont'd. of page 1) P260 Do not breathe dust. P264 Wash thoroughly after handling. Wear protective gloves/protective clothing/eve protection. P280 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. P310 Wash contaminated clothing before reuse. P363 P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. · Additional information: Read the label and safety data sheet before use. Prevent dust accumulations to minimize explosion hazard. Keep away from all ignition sources including heat, sparks and flame. Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Components:

| - | | | |
|-----------|------------------|--|-----|
| 5329-14-6 | sulphamidic acid | 🚸 Skin Irrit. 2, H315; Eye Irrit. 2A, H319 | 80% |
| 9005-25-8 | Starch | Combustible Dust | 20% |

· Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

[•] Description of first aid measures

· After inhalation: Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Brush off loose particles from skin. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Seek immediate help for blistering or open wounds.

If skin irritation continues, consult a doctor.

· After eye contact:

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

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Caustic effect on skin and mucous membranes. Gastric or intestinal disorders when ingested.

· Danger:

Danger of gastric perforation.

Causes serious eye damage.

· Indication of any immediate medical attention and special treatment needed:

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· Extinguishing media

· Suitable extinguishing agents:

CO2, extinguishing powder or water spray. Fight larger fires with water spray.

For safety reasons unsuitable extinguishing agents: No relevant information available.

· Special hazards arising from the substance or mixture

May form combustible dust concentrations in air.

During heating or in case of fire poisonous gases are produced.

Advice for firefighters

· Protective equipment:

Wear self-contained respiratory protective device. Wear fully protective suit.

6 Accidental release measures

[•] Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Remove ignition sources.

Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Methods and material for containment and cleaning up

Pick up mechanically.

Sweep up and place into an appropriate container.

Dispose of the collected material according to regulations.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· Handling

· Precautions for safe handling:

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| | (Cont'd. of page |
|---|------------------|
| Prevent formation of dust. | |
| Any deposit of dust which cannot be avoided must be regularly removed. | |
| Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water. | |
| Information about protection against explosions and fires: | |
| May form combustible dust concentrations in air. | |
| Avoid dust cloud formation. Keep ignition sources away. No smoking. | |
| Conditions for safe storage, including any incompatibilities Requirements to be met by storerooms and receptacles: Storage area should be dry and well-ventilated. | |
| Information about storage in one common storage facility: | |
| Protect from humidity and water. | |
| Do not store together with alkalis (caustic solutions). | |
| Store away from oxidizing agents. | |
| Further information about storage conditions: | |
| Keep containers tightly sealed. | |
| This product is hygroscopic. | |
| Specific end use(s) No relevant information available. | |

8 Exposure controls/personal protection

[•] Control parameters

| 9005-25-8 Starch | | |
|------------------|---|--|
| PEL (USA) | Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction | |
| REL (USA) | Long-term value: 10* 5** mg/m³ *total dust **respirable fraction | |
| TLV (USA) | Long-term value: 10 mg/m ³ | |
| EL (Canada) | Long-term value: 10* 3** mg/m³ *total dust;**respirable fraction | |
| EV (Canada) | Long-term value: 10 mg/m³ total dust | |
| LMPE (Mexico) | Long-term value: 10 mg/m³ A4 | |

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Avoid breathing dust.

• Engineering controls: Provide adequate ventilation.

• Breathing equipment:

Not required under normal conditions of use.

For large spills, respiratory protection may be advisable.

NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Protection of hands:

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Protective gloves

Material of gloves
 Nitrile rubber, NBR
 Butyl rubber, BR
 Neoprene gloves
 Natural rubber, NR
 Sensibilization by the components in the glove materials is possible.
 Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment No special requirements.

· Risk management measures No special requirements.

| Information on basic physical and chemical properties | | | |
|---|---|--|--|
| Appearance: | Deveder | | |
| Form: Color: | Powder White | | |
| Odor: | Characteristic | | |
| Odor threshold: | Not determined. | | |
| pH-value: | Not applicable. | | |
| Melting point/Melting range: | Not determined. | | |
| Boiling point/Boiling range: | Not determined. | | |
| Flash point: | The product is not flammable. | | |
| Flammability (solid, gaseous): | May form combustible dust concentrations in air. | | |
| Auto-ignition temperature: | Not determined. | | |
| Decomposition temperature: | Not determined. | | |
| Danger of explosion: | Can pose a dust explosion hazard if dispersed in air. | | |
| Explosion limits | | | |
| Lower: | Not determined. | | |
| Upper: | Not determined. | | |
| Oxidizing properties: | Not determined. | | |
| Vapor pressure: | Not determined. | | |
| Density: | | | |
| Relative density: | 0.65 | | |
| Vapor density: | Not applicable. | | |

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|----------------------------------|------------------------------------|----------------|
| Evaporation rate: | Not applicable. | |
| Solubility in / Miscibility with | | |
| Water: | Partly soluble. | |
| Partition coefficient (n-octand | I/water): Not determined. | |
| Viscosity | | |
| Dynamic: | Not applicable. | |
| Kinematic: | Not applicable. | |
| Other information | No relevant information available. | |

| - | o relevant information available. | |
|-------------------|--|--|
| | ility: Stable under normal temperatures and pressures. | |
| | mposition / conditions to be avoided: | |
| | ion if used and stored according to specifications. | |
| Possibility o | f hazardous reactions | |
| Risk of dust ex | plosion if enriched with fine dust in the presence of air. | |
| Reacts with all | | |
| Reacts with ox | | |
| | ay be released if heated above the decomposition point. | |
| Corrosive action | n on metals in the presence of water. | |
| Conditions t | o avoid | |
| Moisture. | | |
| Prevent formation | ion of dust. | |
| Incompatible | e materials | |
| Alkalis. | | |
| Oxidizing ager | ts. | |
| Hazardous d | ecomposition products | |
| Under fire con | | |
| | ide and carbon dioxide | |
| Nitrogen oxide | | |

11 Toxicological information

[·] Information on toxicological effects

• Acute toxicity: Based on available data, the classification criteria are not met.

- · LD/LC50 values that are relevant for classification: None.
- · Primary irritant effect:

• On the skin: Caustic effect on skin and mucous membranes.

- · On the eye: Strong irritant with the danger of severe eye injury.
- Sensitization: Based on available data, the classification criteria are not met.

IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NTP (National Toxicology Program):

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|-----|---|
| | None of the ingredients are listed. |
| • (| OSHA-Ca (Occupational Safety & Health Administration): |
| | None of the ingredients are listed. |
| • | Probable route(s) of exposure: |
| | Ingestion. |
| | Inhalation. |
| | Eye contact. |
| | Skin contact. |
| | Acute effects (acute toxicity, irritation and corrosivity): Causes severe skin burns and eye damage |
| ۰I | Repeated dose toxicity: No relevant information available. |
| • (| Germ cell mutagenicity: Based on available data, the classification criteria are not met. |
| • (| Carcinogenicity: Based on available data, the classification criteria are not met. |
| ۰I | Reproductive toxicity: Based on available data, the classification criteria are not met. |
| | STOT-single exposure: Based on available data, the classification criteria are not met. |
| | STOT-repeated exposure: Based on available data, the classification criteria are not met. |
| | Aspiration hazard: Based on available data, the classification criteria are not met. |

12 Ecological information

[·] Toxicity

- · Aquatic toxicity No relevant information available.
- · Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- Mobility in soil: No relevant information available.
- [•] Additional ecological information

· General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. If the dilution of the use-level pH-value is considerably increased after use, the aqueous waste, emptied into drains, is only low water-dangerous.

Other adverse effects No relevant information available.

13 Disposal considerations

[·] Waste treatment methods

· Recommendation:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

[·] Uncleaned packagings

• Recommendation: Disposal must be made according to official regulations.

14 Transport information

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| UN-Number DOT, ADR/RID/ADN, IMDG, IATA | UN3260 |
| UN proper shipping name DOT ADR/RID/ADN, IMDG, IATA | Corrosive solid, acidic, inorganic, n.o.s. (Sulfamic ac CORROSIVE SOLID, ACIDIC, INORGANIC, N.O (SULPHAMIC ACID) |
| Transport hazard class(es) DOT | |
| Class Label | 8 8 |
| ADR/RID/ADN | |
| Class Label | 8 (C2) 8 |
| IMDG, IATA | |
| Class Label | 8 8 |
| Packing group DOT, ADR/RID/ADN, IMDG, IATA | III |
| Environmental hazards | Not applicable. |
| Special precautions for user Danger code (Kemler): EMS Number: Segregation groups | Warning: Corrosive substances 80 F-A,S-B Acids |
| Transport in bulk according to Annex MARPOL73/78 and the IBC Code | Il of Not applicable. |

15 Regulatory information

[•] Safety, health and environmental regulations/legislation specific for the substance or mixture

United States (USA)

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| SARA | (Cont'd. of p |
|---|---------------|
| Section 302 (extremely hazardous substances): | |
| None of the ingredients are listed. | |
| Section 355 (extremely hazardous substances): | |
| None of the ingredients are listed. | |
| Section 313 (Specific toxic chemical listings): | |
| None of the ingredients are listed. | |
| TSCA (Toxic Substances Control Act) | |
| All ingredients are listed or exempt. | |
| Proposition 65 (California) | |
| Chemicals known to cause cancer: | |
| None of the ingredients are listed. | |
| Chemicals known to cause developmental toxicity for females | |
| None of the ingredients are listed. | |
| Chemicals known to cause developmental toxicity for males: | |
| None of the ingredients are listed. | |
| Chemicals known to cause developmental toxicity: | |
| None of the ingredients are listed. | |
| EPA (Environmental Protection Agency): | |
| None of the ingredients are listed. | |
| IARC (International Agency for Research on Cancer): | |
| None of the ingredients are listed. | |
| Canadian Domestic Substances List (DSL): | |
| All ingredients listed on DSL or NDSL. | |
| | |

specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent OSHA: Occupational Safety & Health Administration Met. Corr.1: Corrosive to metals - Category 1 Skin Corr. 1C: Skin corrosion/irritation - Category 1C Skin Irrit. 2: Skin corrosion/irritation - Category 2 Eye Dam. 1: Serious eye damage/eye irritation – Category 1 Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A · Sources Website, European Chemicals Agency (echa.europa.eu) Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/ (Cont'd. on page 10)

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overview/home.do) Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org) Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6 Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5. Safety Data Sheets, Individual Manufacturers SDS Prepared by: ChemTel Inc. 1305 North Florida Avenue Tampa, Florida USA 33602-2902 Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573 Website: www.chemtelinc.com