SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Starch Acid Indicator Powder

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: ANDST5205-H

Recommended uses of the product and restrictions on use:

Manufacturer Details:
   AquaPhoenix Scientific, Inc
   9 Barnhart Drive, Hanover, PA 17331
   (717) 632-1291

Supplier Details:
   Anderson Chemical Company
   325 South David Avenue, Litchfield, MN 55355
   (320) 693-2477

Emergency telephone number:
   Anderson Chemical Company   Emergency Telephone No.: (800) 255-3924

SECTION 2 : Hazards identification

Classification of the substance or mixture:

- **Irritant**
  - Skin irritation, category 2
  - Eye irritation, category 2A

- **Environmentally Damaging**
  - Chronic hazards to the aquatic environment, category 3

May form combustible dust concentrations in air.
Skin irrit. 2
Eye irrit. 2A
Aquatic ChrTox. 3

Signal word : Warning

Hazard statements:
Causes skin irritation
Causes serious eye irritation
Harmful to aquatic life with long lasting effects

Precautionary statements:
Wash ... thoroughly after handling
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
IF ON SKIN: Wash with soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
Specific treatment (see ... on this label)
If skin irritation occurs: Get medical advice/attention
If eye irritation persists get medical advice/attention
Take off contaminated clothing and wash before reuse  
Dispose of contents/container to ...

Other Non-GHS Classification:

<table>
<thead>
<tr>
<th>NFPA SCALE (0-4)</th>
<th>HMIS RATINGS (0-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 3</td>
<td>Flammability 1</td>
</tr>
<tr>
<td>Physical Hazard 0</td>
<td>Protection X</td>
</tr>
</tbody>
</table>

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredients:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 9005-25-8 Starch, Potato, Reagent Grade</td>
<td>20 %</td>
</tr>
<tr>
<td>CAS 5329-14-6 Sulphamidic acid</td>
<td>80 %</td>
</tr>
</tbody>
</table>

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Consult a physician.

After eye contact: Flush eyes with water as a precaution. Rinse or flush exposed eye gently using water for 15-20 minutes. Consult a physician.

After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water. DO NOT induce vomiting. Consult a physician.

Most important symptoms and effects, both acute and delayed:


Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.
SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Carbon oxides may be released. Nitrogen oxides. Sulphur oxides.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid generating dust. Avoid breathing vapors, dust, mist, or gas. Further processing of solid materials may result in the formation of combustible dusts.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area. Avoid contact with skin, eyes, and clothing.

Environmental precautions:

Prevent from reaching drains, sewer, or waterway. Prevent further leakage or spillage. Should not be released into environment.

Methods and material for containment and cleaning up:


Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions refer to Section 2. Avoid contact with skin, eyes, and clothing. Avoid dispersal of dust in the air. Do not clear dust on surfaces with compressed air. Wash hands after handling.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Store away from incompatible materials. Refer to Sections 5 and 10. Store product and empty container away from heat and sources of ignition. Keep container tightly closed in a cool, dry, and well-ventilated area. Store in inert atmosphere. Protect from freezing an physical damage. Store as corrosive.

SECTION 8 : Exposure controls/personal protection
**Safety Data Sheet**

according to 29CFR1910/1200 and GHS Rev. 3

**Effective date**: 01.12.2015

**Starch Acid Indicator Powder**

**Control Parameters:**
- 9005-25-8, High-polymeric carbohydrate material, 10 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
- 9005-25-8, High-polymeric carbohydrate material, 15 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- 9005-25-8, High-polymeric carbohydrate material, 5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- 9005-25-8, High-polymeric carbohydrate material, 5 mg/m³ USA. NIOSH Recommended Exposure Limits
- 9005-25-8, High-polymeric carbohydrate material, 10 mg/m³ USA. NIOSH Recommended Exposure Limits

**Appropriate Engineering controls:** Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

**Respiratory protection:** Normal ventilation is adequate. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

**Protection of skin:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wear protective clothing.

**Eye protection:** Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles.

**General hygienic measures:** Perform routine housekeeping to prevent dust generation. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash hands before breaks and immediately after handling the product.

**SECTION 9 : Physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance (physical state, color):</strong></td>
<td>White powder.</td>
</tr>
<tr>
<td><strong>Explosion limit lower:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Explosion limit upper:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Odorless</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Vapor density:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Relative density:</strong></td>
<td>Approx 2</td>
</tr>
<tr>
<td><strong>Melting/Freezing point:</strong></td>
<td>Decomposes at 205°C</td>
</tr>
<tr>
<td><strong>Solubilities:</strong></td>
<td>Soluble in water: 213 g/l at 20°C</td>
</tr>
<tr>
<td><strong>Boiling point/Boiling range:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Flash point (closed cup):</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Auto/Self-ignition temperature:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Not Determined</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>a. Kinematic: Not Determined</td>
</tr>
<tr>
<td></td>
<td>b. Dynamic: Not Determined</td>
</tr>
</tbody>
</table>

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Starch Acid Indicator Powder

Density: Not Determined

SECTION 10 : Stability and reactivity

Reactivity: None under normal processing.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions:
Conditions to avoid: Dust generation. Incompatible materials.

SECTION 11 : Toxicological information

Acute Toxicity:
Oral: 9005-25-8 LD50 Intraperitoneal - Mouse - 6,600 mg/kg
Oral: 5329-14-6 LD50 Oral - rat - 3,160 mg/kg

Chronic Toxicity: No additional information.

Corrosion Irritation:
Dermal: 9005-25-8 Skin - Human Result: Mild skin irritation - 3 h
Dermal: 5329-14-6 Skin - Human Result: Mild skin irritation
Ocular: 5329-14-6 Eyes - rabbit Result: Moderate eye irritation

Sensitization: No additional information.

Single Target Organ (STOT): No additional information.

Numerical Measures: No additional information.

Carcinogenicity: No additional information.

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12 : Ecological information

Ecotoxicity
Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - 70.3 mg/l - 96 h (OECD Test Guideline 203): 5329-14-6

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

### SECTION 14: Transport information

**UN-Number**
3261

**UN proper shipping name**
Corrosive Solid, Acidic, Organic, N.O.S., (Sulfamic Acid)

**Transport hazard class(es)**

- **Class:** 8 Corrosive substances

**Packing group:** III

**Environmental hazard:**

**Transport in bulk:**

**Special precautions for user:**

### SECTION 15: Regulatory information

**United States (USA)**

- **SARA Section 311/312 (Specific toxic chemical listings):**
  - Acute:
- **SARA Section 313 (Specific toxic chemical listings):**
  - None of the ingredients is listed

- **RCRA (hazardous waste code):**
  - None of the ingredients is listed

- **TSCA (Toxic Substances Control Act):**
  - All ingredients are listed.

- **CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**
  - None of the ingredients is listed

**Proposition 65 (California):**

- **Chemicals known to cause cancer:**
  - None of the ingredients is listed

- **Chemicals known to cause reproductive toxicity for females:**
  - None of the ingredients is listed

- **Chemicals known to cause reproductive toxicity for males:**
  - None of the ingredients is listed

- **Chemicals known to cause developmental toxicity:**
  - None of the ingredients is listed

**Canada**

- **Canadian Domestic Substances List (DSL):**
All ingredients are listed.

**Canadian NPRI Ingredient Disclosure list (limit 0.1%)**:
None of the ingredients is listed

**Canadian NPRI Ingredient Disclosure list (limit 1%)**:
None of the ingredients is listed

**SECTION 16 : Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations of this material.

**GHS Full Text Phrases**:

**Abbreviations and acronyms**:
IMDG: International Maritime Code for Dangerous Goods  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
DOT: US Department of Transportation  
IATA: International Air Transportation Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)