

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name APEX CLEAR

Other means of identification

Product Code 30043

Recommended use of the chemical and restrictions on use

Recommended Use Meat/Poultry processing antimicrobial/pH adjuster/processing aid.

Uses advised against Follow the directions for use on the label when applying this product

Details of the supplier of the safety data sheet

Manufacturer Address

Safe Foods Chemical Innovations
1501 E. 8th Street
North Little Rock, AR 72114

Emergency telephone number

Company Phone Number 501-758-8500
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

| | |
|--|---------------------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 2 |
| Skin corrosion/irritation | Category 1 Sub-category A |
| Serious eye damage/eye irritation | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 - (H335) |

Label elements

Emergency Overview

DANGER

Hazard statements

Fatal if inhaled

Causes severe skin burns and eye damage

May cause respiratory irritation



Physical state Liquid **Color** Colorless to amber **Odor** None

Precautionary Statements - Prevention

Do not breathe dusts or mists

Use only outdoors or in a well-ventilated area

Wear respiratory protection

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific treatment is urgent (see Section 4 on SDS)

Immediately call a POISON CENTER or doctor

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 or doctor

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Weight-% |
|----------------|-----------|-----------|
| Water | 7732-18-5 | 55-57 |
| Sulfuric acid | 7664-93-9 | 38.5-39.5 |
| Sodium sulfate | 7757-82-6 | 4.5-5.5 |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First aid measures****Eye contact**

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Seek immediate medical attention/advice.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists. For severe burns, immediate medical attention is required. Wash contaminated clothing and shoes before reuse.

Inhalation

Remove to fresh air. Administer oxygen if breathing is difficult. Call a physician immediately.

Ingestion

Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Most important symptoms and effects, both acute and delayed**Symptoms**

See Section 11 for symptom information.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Treat symptomatically. Symptoms may be delayed.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Foam. Extinguishing powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Exothermic reaction will occur upon dilution with water. When material is not involved in fire: do not use water on material itself.

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

Explosion data**Sensitivity to Mechanical Impact**

None.

Sensitivity to Static Discharge

None.

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. Stay upwind. Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it without risk. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas. Avoid breathing vapors or mists.

For emergency responders

Isolate area. Keep unnecessary personnel away. Remove all sources of ignition.

Environmental precautions**Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. 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. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up

Stop leak if you can do it without risk. Never return unused product to the original container. For small spills: Soak up with inert absorbent material. Flush area twice with water to remove any remaining residues.

For large spills: Stop spill. Contain spill. Absorb on inert material such as sand, clay, etc. Shovel into approved containers, close, label and send to approved hazardous chemical dump. Neutralize remaining traces. Flush area with water.

7. HANDLING AND STORAGE**Precautions for safe handling**

Advice on safe handling Add product to water, never add water to this product. Exothermic reaction will occur upon dilution with water. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Use only in well-ventilated areas. Avoid breathing vapors or mists. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. When using do not eat, drink or smoke. Never return unused product to the original container.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep from freezing. Do not allow water to get into container. Do not store in metal containers.

Incompatible materials Incompatible with oxidizing agents. Bases. Metals. Reducing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|----------------------------|---|--------------------------|--|
| Sulfuric acid 7664-93-9 | TWA: 0.2 mg/m ³ thoracic particulate matter | TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ TWA: 1 mg/m ³ |

Appropriate engineering controls

Engineering Controls Showers, eyewash stations, ventilation system.

Individual protection measures, such as personal protective equipment

Eye/face protection Splash proof chemical goggles and face shield.

Skin and body protection Wear protective Neoprene™ gloves or rubber gloves. Impervious protective clothing such as rain suits and rubber boots. An emergency eye wash and shower should be in the chemical storage area plus in any area where chemicals are mixed.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Wash face, hands and any exposed skin thoroughly after handling. Wash contaminated clothing and shoes before reuse. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|---------------------------------------|--------------------------|---------------------------|--------------------------|
| Physical state | Liquid | Odor | None |
| Appearance | Aqueous solution | Odor threshold | No information available |
| Color | Colorless to amber | Remarks | Method |
| Property | Values | ±0.5 @ 21°C (1% solution) | |
| pH | 1.5 | | |
| Melting point / freezing point | -18 °C / -0.4 °F | | |
| Boiling point / boiling range | 121 °C / 249.8 °F | | |
| Flash point | No information available | | |
| Evaporation rate | No information available | | |
| Flammability (solid, gas) | No information available | | |
| Flammability Limit in Air | | | |
| Upper flammability limit: | No information available | | |
| Lower flammability limit: | No information available | | |
| Vapor pressure | No information available | | |
| Vapor density | No information available | | |
| Specific Gravity | 1.36 g/cc | | |
| Water solubility | Soluble in water | | |
| Solubility in other solvents | No information available | | |
| Partition coefficient | No information available | | |
| Autoignition temperature | No information available | | |
| Decomposition temperature | No information available | | |
| Kinematic viscosity | No information available | | |
| Dynamic viscosity | No information available | | |
| Explosive properties | No information available | | |
| Oxidizing properties | No information available | | |
| VOC Content (%) | No information available | | |

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Exothermic reaction will occur upon dilution with water.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Keep from freezing. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Incompatible materials.

Incompatible materials

Incompatible with oxidizing agents. Bases. Metals. Reducing agent.

Hazardous Decomposition Products

Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Oxides of sulfur. Carbon oxides.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Inhalation**

Inhalation of vapors in high concentration may cause irritation of respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs. Harmful by prolonged exposure through inhalation.

Eye contact

Corrosive to the eyes and may cause severe damage including blindness. Symptoms include itching, burning, redness, and tearing of eyes.

Skin Contact

Corrosive. Contact causes severe skin irritation and possible burns.

Ingestion

Harmful if swallowed. Can burn mouth, throat, and stomach.

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-----------------------------|---------------------|-------------------|--------------------------------------|
| Sulfuric acid 7664-93-9 | = 2140 mg/kg (Rat) | - | 85 - 103 mg/m ³ (Rat) 1 h |
| Sodium sulfate 7757-82-6 | > 10000 mg/kg (Rat) | > 4 g/kg (Rabbit) | - |

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Sensitization**

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Strong inorganic acid mists containing sulfuric acid (Occupational exposure): Proven (Human, Group 1, IARC); Suspected (Human Group 2A, ACGIH); Group X (NPT);
Classification not applicable to sulfuric acid and sulfuric acid solutions.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------------------|-------|---------|-------|------|
| Sulfuric acid 7664-93-9 | A2 | Group 1 | Known | X |

Reproductive toxicity

No information available.

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

No information available.

Chronic toxicity

Prolonged exposure may cause chronic effects.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information**Unknown Acute Toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document**Oral LD50**

5,340.80 mg/kg

Dermal LD50

80,080.00 mg/kg

Mist

0.0546 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Harmful to aquatic life with long lasting effects

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|-----------------------------|----------------------|---|---|
| Sulfuric acid 7664-93-9 | - | 500: 96 h Brachydanio rerio mg/L LC50 static | 29: 24 h Daphnia magna mg/L EC50 |
| Sodium sulfate 7757-82-6 | - | 13500 - 14500: 96 h Pimephales promelas mg/L LC50 6800: 96 h Pimephales promelas mg/L LC50 static 3040 - 4380: 96 h Lepomis macrochirus mg/L LC50 static 13500: 96 h Lepomis macrochirus mg/L LC50 | 630: 96 h Daphnia magna mg/L EC50 2564: 48 h Daphnia magna mg/L EC50 |

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

Soluble in water.

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 Dispose of in accordance with federal, state and local regulations.

US EPA Waste Number D002

14. TRANSPORT INFORMATION

DOT

UN/ID No. 3264

Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (contains sulfuric acid)

Hazard Class 8

Packing Group III

Emergency Response Guide Number 154

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL/NDSL Complies

EINECS/ELINCS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Note: Sulfuric acid only needs to be reported if it is in an aerosol form (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

| Chemical Name | SARA 313 - Threshold Values % |
|---------------------------|-------------------------------|
| Sulfuric acid - 7664-93-9 | 1.0 |

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 contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Sulfuric acid 7664-93-9 | 1000 lb | - | - | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ) |
|----------------------------|--------------------------|----------------|---|
| Sulfuric acid 7664-93-9 | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

US State Regulations

California Proposition 65

WARNING! "This product can expose you to chemicals which is [are] known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov."

| Chemical Name | California Proposition 65 |
|---------------------------|---------------------------|
| Sulfuric acid - 7664-93-9 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|----------------------------|------------|---------------|--------------|
| Sulfuric acid 7664-93-9 | X | X | X |

| | | | |
|-----------------------------|---|---|---|
| Sodium sulfate 7757-82-6 | - | X | X |
|-----------------------------|---|---|---|

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

| | | | | | | | |
|-------------|----------------|---|--------------|---|------------------|---|---|
| NFPA | Health hazards | 3 | Flammability | 0 | Instability | 1 | Physical and Chemical Properties |
| | | | | | | | Corrosive, Acid |
| HMIS | Health hazards | 3 | Flammability | 0 | Physical hazards | 1 | Personal protection H (splash goggles, gloves, synthetic apron, vapor respirator) |

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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 health hazards given on this SDS apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of exposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

End of Safety Data Sheet