

SAFETY DATA SHEET

Creation Date 26-Sep-2009

Revision Date 17-Jan-2018

Revision Number 3

1. Identification

Product Name Starch Indicator Solution Stabilized

Cat No. : SS408-1; SS408-4

Synonyms None

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

None required

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|-----------|-----------|----------|
| Water | 7732-18-5 | 98.9 |

| | | |
|-------------|-----------|-------|
| Acetic acid | 64-19-7 | < 1.0 |
| Starch | 9005-25-8 | < 0.1 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| Inhalation | Remove to fresh air. Get medical attention immediately if symptoms occur. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. |
| Most important symptoms and effects | None reasonably foreseeable. |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|--------------------------|
| Unsuitable Extinguishing Media | No information available |
| Flash Point | Not applicable |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

None reasonably foreseeable.

Hazardous Combustion Products

None known.

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.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 1 | 0 | 0 | N/A |

6. Accidental release measures

| | |
|----------------------------------|--|
| Personal Precautions | Use personal protective equipment as required. Ensure adequate ventilation. |
| Environmental Precautions | Should not be released into the environment. See Section 12 for additional Ecological Information. |

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal.

Up

7. Handling and storage

| | |
|-----------------|--|
| Handling | Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid |
|-----------------|--|

contact with skin, eyes or clothing. Avoid ingestion and inhalation.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|-------------|-----------------------------|--|--|--|
| Acetic acid | TWA: 10 ppm STEL: 15 ppm | (Vacated) TWA: 10 ppm (Vacated) TWA: 25 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³ | IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ | TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ |
| Starch | TWA: 10 mg/m ³ | (Vacated) TWA: 15 mg/m ³ (Vacated) TWA: 5 mg/m ³ TWA: 15 mg/m ³ TWA: 5 mg/m ³ | TWA: 10 mg/m ³ TWA: 5 mg/m ³ | TWA: 10 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

None under normal use conditions.

Personal Protective Equipment**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

No protective equipment is needed under normal use conditions.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|---|--------------------------|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | 0 °C / 32 °F |
| Boiling Point/Range | 100 °C / 212 °F |
| Flash Point | Not applicable |
| Evaporation Rate | > 1 (Ether = 1.0) |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | 14 mmHg |
| Vapor Density | 0.7 |
| Specific Gravity | 1.0 |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |

Viscosity No information available
 VOC Content(%) 0.999899983406067

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products None under normal use conditions

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------|--------------------|-------------|-----------------------|
| Water | - | - | - |
| Acetic acid | 3310 mg/kg (Rat) | - | > 40 mg/L (Rat) 4 h |

Toxicologically Synergistic Products

No information available

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

Irritation May cause skin, eye, and respiratory tract irritation

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------|-----------|------------|------------|------------|------------|------------|
| Water | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Acetic acid | 64-19-7 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Starch | 9005-25-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Do not empty into drains.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------|------------------|--|---|--------------------|
| Acetic acid | - | Pimephales promelas: LC50 = 88 mg/L/96h Lepomis macrochirus: LC50 = 75 mg/L/96h | Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min | EC50 = 95 mg/L/24h |

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|-------------|---------|
| Acetic acid | -0.2 |

13. Disposal considerations

Waste Disposal Methods 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 to ensure complete and accurate classification.

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

United States of America Inventory

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|-------------|-----------|------|---|-----------------------------|
| Water | 7732-18-5 | X | ACTIVE | - |
| Acetic acid | 64-19-7 | X | ACTIVE | - |
| Starch | 9005-25-8 | X | ACTIVE | XU |

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDSL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|-------------|-----------|-----|------|-----------|-------|------|------|-------|----------|
| Water | 7732-18-5 | X | - | 231-791-2 | X | X | X | X | KE-35400 |
| Acetic acid | 64-19-7 | X | - | 200-580-7 | X | X | X | X | X |
| Starch | 9005-25-8 | X | - | 232-679-6 | X | X | X | X | KE-32128 |

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|-------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Acetic acid | X | 5000 lb | - | - |

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-------------|--------------------------|----------------|
| Acetic acid | 5000 lb | - |

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------|---------------|------------|--------------|----------|--------------|
| Water | - | - | X | - | - |
| Acetic acid | X | X | X | - | X |
| Starch | X | - | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

16. Other information

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Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

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

End of SDS