

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 1 of 7

Starch Ind Soln,0.5%w/v

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

Product name : Starch Ind Soln,0.5%w/v

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25581

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:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:



Corrosive

Serious eye damage, category 1



Irritant

Skin irritation, category 2

Eye Dam. 1

Skin Corr 2

Signal word :Danger

Hazard statements:

Causes serious eye damage

Causes skin irritation

Precautionary statements:

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

Keep out of reach of children

Read label before use

Wash ... thoroughly after handling

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing

Rinse mouth

Specific treatment (see supplemental first aid instructions on this label)

Immediately call a POISON CENTER or doctor/physician

Take off contaminated clothing and wash before reuse

IF ON SKIN: Wash with soap and water

If skin irritation occurs: Get medical advice/attention

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 2 of 7

Starch Ind Soln,0.5%w/v

WHMIS E:

(0.056% in aqueous solution, 0.11%, 0.56% in aqueous solution, 2.5%, 2.8%, 5.6% in aqueous solution, 25%, 28%, 33.3%, 40%, 50% in aqueous solution) Potassium hydroxide

Combustible Dust Hazard: :

May form combustible dust concentrations in air (during processing).

Combustible Dust Hazard: :

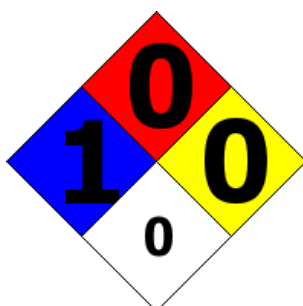
May form combustible dust concentrations in air (during processing).

Combustible Dust Hazard: :

May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

WHMIS NFPA/HMIS



NFPA SCALE (0-4)

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 69-72-7	Salicylic Acid	0.1 %
CAS 9005-84-9	Starch	0.5 %
CAS 7646-85-7	Zinc Chloride	0.4 %
CAS 64-19-7	Acetic Acid	0.36 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Give artificial respiration if necessary. Move exposed individual to fresh air. Seek medical advice if discomfort or irritation persists.

After skin contact: Seek medical advice if discomfort or irritation persists. Wash affected area with soap and water. Rinse/flush exposed skin gently using water for 15-20 minutes. Seek immediate medical attention

After eye contact: Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Immediately get medical assistance.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Get medical assistance. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Nausea, Headache, Shortness of breath.;

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 3 of 7

Starch Ind Soln,0.5%w/v

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically. DO NOT use mouth-to-mouth resuscitation without a barrier device to prevent responder from receiving burns. Follow with gastric lavage with activated charcoal. If available, administer ferric hexacyanoferrate as a gastrointestinal trapping agent. Persons with pre - existing skin disorders, eye problems, or impaired kidney function may be more susceptible to the effects of this substance.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

For safety reasons unsuitable extinguishing agents: Water or foam may cause frothing.

Special hazards arising from the substance or mixture:

Use water spray to cool unopened containers. Combustion products may include carbon oxides or other toxic vapors.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8. Wear special protective clothing and positive pressure self-contained breathing apparatus. Wear protective eyewear, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. 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.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Remove all sources of ignition. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Avoid contact with skin, eyes, and clothing. Dust deposits should not be allowed to accumulate on surfaces. Use spark-proof tools and explosion-proof equipment. Ensure adequate ventilation. Avoid contact with skin, eyes, and clothing. Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Protect from heat. Stop the spill, if possible. When necessary use NIOSH approved breathing equipment. Wear protective equipment. Transfer to a disposal or recovery container. Use respiratory protective device against the effects of fumes/dust/aerosol. Contain spilled material by diking or using inert absorbent.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13

Methods and material for containment and cleaning up:

Absorb with suitable material. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Absorb with suitable absorbent material such as sand or earth and containerize for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 4 of 7

Starch Ind Soln,0.5%w/v

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Absorb spillage to prevent material damage. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Wash hands after handling.

Conditions for safe storage, including any incompatibilities:

Provide ventilation for containers. Store away from foodstuffs. Store in cool, dry conditions in well sealed containers. Store with like hazards. Protect from freezing and physical damage. Provide ventilation for containers. Keep away from food and beverages. Protect from freezing and physical damage. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection



Control Parameters:

7646-85-7, Zinc Chloride, ACGIH TLV TWA 1 mg/m³

7646-85-7, Zinc Chloride, OSHA PEL TWA 1 mg/m³

64-19-7, Acetic acid , ACGIH TLV: 25mg/m³

64-19-7, Acetic acid , OSHA PEL: 25mg/m³

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Normal ventilation is adequate. Ensure eyewash and safety shower are available.

Respiratory protection:

Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Normal ventilation is adequate. Where risk assessment shows air-purifying respirators are refer to Section 6.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Wear protective clothing.

Eye protection:

Safety glasses or goggles are appropriate eye protection.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Wash hands and exposed skin with soap and plenty of water. Perform routine housekeeping. Before wearing again wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Translucent liquid	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Slight potato - like odor	Vapor pressure:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	Not Determined	Relative density:	Not Determined
Melting/Freezing point:	Not Determined	Solubilities:	Infinite solubility in water.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 5 of 7

Starch Ind Soln,0.5%w/v

Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Determined
Flash point (closed cup):	Not Determined	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Determined	Decomposition temperature:	Not Determined
Flammability (solid,gaseous):	Not Determined	Viscosity:	a. Kinematic:Not Determined b. Dynamic: Not Determined
Density: Not Determined Specific Gravity: :2.04			

SECTION 10 : Stability and reactivity

Reactivity:Stable under normal conditions of use. Moisture and light sensitive. Darkens on exposure to light.

Chemical stability:Stable under normal conditions.No decomposition if used and stored according to specifications.

Possible hazardous reactions:No information available.

Conditions to avoid:Incompatible materials.

Incompatible materials:Strong oxidizing agents.Strong acids.Strong bases.

Hazardous decomposition products:Carbon oxides (CO, CO2).

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	284 mg/kg	Oral LD50 Rat
Chronic Toxicity: No additional information.		
Corrosion Irritation: No additional information.		
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

Fish: LC50 - Cyprinus carpio (Carp) - 0.4 - 2.2 mg/l - 96.0 h

Invertebrates: EC50 - Daphnia magna (Water flea) - 0.2 mg/l - 48 h

Algae: Growth inhibition LOEC - Pseudokirchneriella subcapitata - 12.5 mg/l - 96 h

Persistence and degradability: Readily degradable in the environment.

Bioaccumulative potential:

Mobility in soil:

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 6 of 7

Starch Ind Soln,0.5%w/v

Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Dilute with water and flush to sewer. 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. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Dispose of empty containers as unused product.

SECTION 14 : Transport information

UN-Number

Not Dangerous Goods

UN proper shipping name

Not Dangerous Goods

Transport hazard class(es)

Packing group: Not Dangerous Goods

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

7646-85-7 Zinc Chloride

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):

1310-58-3 Potassium hydroxide 1000 lbs

7646-85-7 Zinc Chloride 1000 lb

64-19-7 Acetic Acid 5000

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

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 01.15.2015

Page 7 of 7

Starch Ind Soln,0.5%w/v

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

12125-02-9 Not Regulated.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

7647-01-0 Hydrochloric Acid
1310-58-3 Potassium hydroxide
7646-85-7 Zinc Chloride
64-19-7 Acetic Acid

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 applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport 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)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
NFPA: National Fire Protection Association (USA)
NPRI: National Pollutant Release Inventory (Canada)

Effective date : 01.15.2015

Last updated : 06.02.2015