

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

Product Identifier

Product Name Sodium Ionic Strength Adjuster

Product No 841111

Pure substance/mixture Mixture

Contains Ammonium Chloride, Ammonium Hydroxide

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Use as laboratory reagent

Uses advised against No Information available

Manufacturer, Importer, Supplier Thermo Fisher Scientific©
Water and Lab Products
22 Alpha Road
Chelmsford, MA 01824, USA
1-978-232-6000

E-mail address info.water@thermo.com

Made in USA

Emergency Telephone 24 Hour Emergency Phone Number
CHEMTREC®
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: 1-703-527-3887
(collect calls accepted)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

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

| | |
|-----------------------------------|--------------|
| Acute oral toxicity | Category 4 |
| Skin Corrosion/Irritation | Category 1 B |
| Serious Eye Damage/Eye Irritation | Category 1 |

Label Elements

Emergency Overview

Danger

Hazard Statements

Harmful if swallowed

Causes severe skin burns and eye damage



Appearance Clear

Physical State Liquid

Odor Ammonia-like

Precautionary Statements

Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

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

Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental instructions on the administration of antidotes on this label)

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/physician

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

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

No information available

Other Information

Toxic to aquatic life with long lasting effects
Toxic to aquatic organisms

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|--------------------|------------|----------|
| Water | 7732-18-5 | 60 - 70% |
| Ammonium Chloride | 12125-02-9 | 20 - 30% |
| Ammonium Hydroxide | 1336-21-6 | 10 - 20% |
| Triton® X-100 | 9002-93-1 | <0.1% |

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

4. FIRST AID MEASURES

First aid measures

| | |
|---|--|
| General Advice | Use first aid treatment according to the nature of the injury. Get medical attention immediately if symptoms occur. Show this safety data sheet to the doctor in attendance. |
| Eye Contact | Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention. |
| Skin Contact | Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. In case of skin reactions, consult a physician. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately. |
| Self-Protection of the First Aider | Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |

Most important symptoms and effects, both acute and delayed

Most important symptoms and effects No information available

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available

Specific Hazards Arising from the Chemical

No information available.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment. For further specification, refer to section 8 of the SDS. Evacuate personnel to safe areas.

Environmental Precautions Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling To avoid risks to human health and the environment, comply with the instructions for use
Wear personal protective equipment
Avoid breathing dust/fume/gas/mist/vapors/spray
Ensure adequate ventilation, especially in confined areas

Conditions for Safe Storage, Including any Incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place
Store at room temperature in the original container
Keep away from direct sunlight

Incompatible Products No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face Protection Wear chemical splash goggles and face shield. If splashes are likely to occur, wear:
Face-shield.

| | |
|---------------------------------|--|
| Skin and Body Protection | Wear protective gloves/clothing. |
| Respiratory Protection | None under normal use conditions. In case of inadequate ventilation wear respiratory protection. |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice. |

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|-----------------------|--------------------------|
| Physical State | Liquid |
| Appearance | Clear |
| Odor | Ammonia-like |
| Odor Threshold | No information available |
| pH | 10.3 |
| PH Range | 8.6 - 12.0 |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|-------------------------------------|--------------------------|-------------------------|
| Melting point/freezing point | No information available | |
| Boiling Point/Range | ~ 100 °C / 212 °F | |
| Flash Point (High in °C) | N/A | |
| 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 | No information available | |
| Water Solubility | Soluble in water | |
| Solubility in other solvents | No information available | |
| Partition coefficient | No information available | |
| Autoignition Temperature | - | |
| 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 | |

Other Information

| | |
|-------------------------|--------------------------|
| Softening Point | No information available |
| Molecular Weight | No information available |
| VOC Content(%) | No information available |
| Density | No Information available |
| Bulk Density | No information available |

10. STABILITY AND REACTIVITY

Reactivity

No Information available

-

Chemical Stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing

Conditions to Avoid

Extremes of temperature and direct sunlight

Incompatible Materials

No information available

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|--------------|--------------------------|
| Inhalation | No information available |
| Eye Contact | No information available |
| Skin Contact | No information available |
| Ingestion | No information available |

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 |
| Mutagenic Effects | No information available |
| Carcinogenicity | No information available. |
| Reproductive Effects | No information available |
| STOT - single exposure | No information available |
| STOT - repeated exposure | No information available |
| Aspiration hazard | No information available |

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1897 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

| Component | Freshwater Algae | Freshwater Fish | Water Flea |
|---------------------------------|------------------|---|---------------------------------------|
| Ammonium Chloride 12125-02-9 | - | LC50: = 725 mg/L, 24h (Lepomis macrochirus) LC50: = 209 mg/L, 96h static | LC50: = 202 mg/L, 24h (Daphnia magna) |

| | | | |
|---------------------------------|---|---|---|
| | | (Cyprinus carpio) | |
| Ammonium Hydroxide 1336-21-6 | - | LC50: = 8.2 mg/L, 96h (Pimephales promelas) | EC50: = 0.66 mg/L, 48h (Daphnia pulex) EC50: = 0.66 mg/L, 48h (water flea) |

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Improper disposal or reuse of this container may be dangerous and illegal.

| Component | CAWAST |
|---------------------------------|--------------------|
| Ammonium Hydroxide 1336-21-6 | Toxic Corrosive |

14. TRANSPORT INFORMATION

DOT

UN-No UN2672
Proper Shipping Name AMMONIA SOLUTION
Hazard Class 8
Packing Group III
Reportable Quantity (RQ): (Ammonium Chloride: RQ (kg)= 2270.00, Ammonium Hydroxide: RQ (kg)= 454.00)
Special Provisions 336, IB3, IP8, T7, TP2
Shipping Description UN2672, AMMONIA SOLUTION, 8, III, Marine Pollutant (Ammonium Hydroxide)
Emergency Response Guide Number 154

ICAO

UN-No UN2672
Proper Shipping Name AMMONIA SOLUTION
Hazard Class 8
Packing Group III
Special Provisions A64
Description UN2672, AMMONIA SOLUTION, 8, III

IATA

UN-No UN2672
Proper Shipping Name AMMONIA SOLUTION
Hazard Class 8
Packing Group III
ERG Code 8L

Special Provisions A64, A803
Description UN2672, AMMONIA SOLUTION, 8, III

IMDG/IMO

UN-No UN2672
Proper Shipping Name AMMONIA SOLUTION
Hazard Class 8
Packing Group III
EmS No. F-A, S-B
Description UN2672, AMMONIA SOLUTION, 8, III, Marine Pollutant

15. REGULATORY INFORMATION

International Inventories

USINV Complies
CANINV Complies
EINECS/ELINCS Does not Comply
ENCS Does not Comply
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

USINV/ TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CANINV/ DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japanese Existing and New Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313

SARA 311/312 Hazard Categories

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

CWA (Clean Water Act)

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ammonium Chloride 12125-02-9 | 5000 lb | - | - | X |
| Ammonium Hydroxide 1336-21-6 | 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)

| Component | Hazardous Substances RQs | CERCLA EHS RQs | RQ |
|-------------------|--------------------------|----------------|---------------------|
| Ammonium Chloride | 5000 lb | - | RQ 5000 lb final RQ |

| | | | |
|---------------------------------|---------|---|---|
| 12125-02-9 | | | RQ 2270 kg final RQ |
| Ammonium Hydroxide 1336-21-6 | 1000 lb | - | RQ 1000 lb final RQ RQ 454 kg final RQ |

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information

No information available

16. OTHER INFORMATION

Prepared By Regulatory Affairs
Prepared For Thermo Fisher Scientific Inc.©
Issue Date No information available
Revision Date 17-Nov-2017
Reason for revision SDS sections updated.

Disclaimer

IMPORTANT: The information contained in this SDS is correct to the best of our knowledge as of the issue date (or subsequent revision date, if any), and is to be used only as a guide. This SDS does not constitute a guarantee (express or implied) of any kind and we make no warranties of any kind as to the accuracy or completeness of the information contained herein or the merchantability or fitness of the product or this information for a particular purpose. It is the responsibility of each individual buyer/user to determine the suitability of this information and the product for its intended purposes. Product sales are subject to Thermo Fisher Scientific's standard terms and conditions of sale. This information relates only to the designated product as shipped and may not be valid if the product is used in combination with any other materials or is not used in accordance with our instructions, or is altered in any way. It is the responsibility of the buyer/user to ensure that its activities comply with all applicable government requirements. Since conditions of use of the product are not under direct control of Thermo Fisher Scientific, it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. Thermo Fisher Scientific will not be liable for any injuries or damages resulting from handling, use, misuse or contact with the product.

End of Safety Data Sheet