

SECTION 1: Identification**1.1 Product identifier**

Product name uS Buffer Solution I

1.2 Other means of identification

uS Buffer Solution I

1.3 Recommended use of the chemical and restrictions on use

Analytical Testing Reagent

1.4 Supplier's details

Name

Address

40W267 Keslinger Road, P.O. Box 393

Lafox, IL 60147-0393

www.rellaser.com laser@rell.com

Telephone

Non-Emergency: (630) 208-2200

1.5 Emergency phone number(s)

800-424-9300 CHEMTREC®

SECTION 2: Hazard identification**General hazard statement**

To the best of our knowledge, this Safety Data Sheet is prepared to comply with US OSHA 29 CFR 1910.1200 and other governmental agencies both domestic and foreign. Hazard and precautionary statements are based on maximum listed concentrations of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or other governmental agencies.

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

- Acute toxicity, oral (C.4.1), Cat. 4
- Acute toxicity, dermal (C.4.2), Cat. 4
- Eye damage/irritation (C.4.5), Cat. 2B

2.2 GHS label elements, including precautionary statements

Pictogram



Irritant

Signal word

Warning

Hazard statement(s)

H303

H316

H320

May be harmful if swallowed

Causes mild skin irritation

Causes eye irritation

Precautionary statement(s)

P264

P270

Wash hands thoroughly after handling.

Do not eat, drink, or smoke when using this product.

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P280
P301+P312
P302+P352
P305+P351+P338

P312
P330
P337+P313
P362+P364
P501

Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER /doctor, if you feel unwell,
IF ON SKIN: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
Rinse mouth.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Dispose of contents/container: Follow applicable federal, state, and local regulations.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

1. Sodium sulfate

Concentration	< 2 % (weight)
Other names / synonyms	Natrii sulfas; Sodium sulfate anhydrous; Sodium sulphate; Sulfuric acid sodium salt (1:2)
EC no.	231-820-9
CAS no.	7757-82-6

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).
If inhaled	Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge.
In case of skin contact	Wash with plenty of soap and water for at least 15 minutes. Call a poison center or doctor if you feel unwell. Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor. Acute and delayed symptoms and effects: May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Acute and delayed symptoms and effects: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

4.2 Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

4.3 Indication of immediate medical attention and special treatment needed, if necessary

After first aid, seek appropriate in-plant, paramedic, or community medical support.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2 Specific hazards arising from the chemical

None known other than material can splatter above 100°C/212°F.

Sodium sulfate: Sulphur oxides, Sodium oxides

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8.

6.2 Environmental precautions

Do not let product enter drains unless in accordance with Federal, State, and local laws and regulations.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Sodium sulfate (CAS: 7757-82-6 EC: 231-820-9)

PEL-TWA: None Est. (OSHA)

TLV@: None Est. (ACGIH)

8.2 Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

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Eye/face protection

Safety glasses if there is a splash hazard. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Protective gloves. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Not required under normal use conditions. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Thermal hazards

No data available.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear colorless liquid
Odor	Characteristic
Odor threshold	Characteristic
pH	5-8
Melting point/freezing point	Approx. 32°F
Initial boiling point and boiling range	212°F+/-
Flash point	No data available.
Evaporation rate	1.0
Flammability (solid, gas)	Non-Flammable
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	Completely soluble in water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

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No data available.

10.4 Conditions to avoid

Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.5 Incompatible materials

Sodium sulfate: Strong acids, Aluminum, Magnesium

10.6 Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Components: Sodium sulfate: LD50 Oral - Mouse - 5,989 mg/kg

Sodium sulfate: LC50 Intravenous - Rabbit - 1220mg/kg

Symptoms (including delayed and immediate effects):

Inhalation: May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin corrosion/irritation

May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Serious eye damage/irritation

May cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

SECTION 12: Ecological information

Toxicity

No data available on product

Components:

Sodium sulfate: LC50 - Lepomis macrochirus (bluegill) - 4,380 mg/l - 96hr

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Sodium sulfate: EC50 - Daphnia magna (water flea) - 2,564 mg/l - 48hr
Sodium sulfate: LC50 - Gambusia affinis (Mosquito fish) - 120 mg/l - 96hr

Persistence and degradability

No data available on product

Bioaccumulative potential

No data available on product

Mobility in soil

No data available.

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available.

SECTION 13: Disposal considerations

Disposal of the product

Disposal should be in accordance with applicable Federal, State, and local laws and regulations. Local regulations may be more stringent than State or Federal requirements.

Disposal of contaminated packaging

Dispose of as unused product. Follow applicable federal, state, and local regulations.

Waste treatment

Manage chemical waste through an approved waste treatment facility.

Sewage disposal

The product should not be allowed to enter drains, water courses or the soil.

Other disposal recommendations

Triple rinse the empty containers with water before disposal to reconditioned or land fill or garbage.

SECTION 14: Transport information

DOT (US)

UN Number: NA

Class: NA

Packing Group: NA

Proper Shipping Name: NON-REGULATED MATERIALS

Reportable quantity (RQ): NA

Marine pollutant: No

Poison inhalation hazard: No

IMDG

UN Number:

Class:

Packing Group:

EMS Number:

Proper Shipping Name:

IATA

UN Number:

Class:

Packing Group:

Proper Shipping Name:

SECTION 15: Regulatory information

15.1 Safety, health, and environmental regulations specific for the product in question

SARA 302 Components

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No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 311/312 Hazards

No SARA Hazards

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Toxic Substances Control Act (TSCA) Inventory

All components of this product are listed in the U.S. Environmental Protection Agencies, Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

New Jersey Right To Know Components

Sodium sulfate: CAS: 7757-82-6

Pennsylvania Right To Know Components

Sodium sulfate: CAS: 7757-82-6

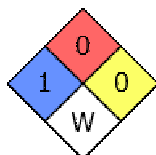
Massachusetts Right To Know Components

Sodium sulfate: CAS: 7757-82-6

HMIS Rating

uS Buffer Solution	
HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

NFPA Rating



SECTION 16: Other information

16.1 Further information/disclaimer

DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their purposes. In no event shall manufacturer be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, whatsoever arising, even if manufacturer has been advised of the possibility of such damages.

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