

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 11-Jun-2024
 Revision Number 3.04

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	pH 3.25 Sodium Citrate Buffer Solution
Product Code	192-07175

Supplier FUJIFILM Wako Pure Chemical Corporation
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Recommended uses For research use only

Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Acute aquatic toxicity

Category 3

Chronic aquatic toxicity

Category 3

Pictograms

Signal word

None

Hazard statements

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements-(Prevention)

- Avoid release to the environment

Precautionary statements-(Response)

Precautionary statements-(Storage)

- Not applicable

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards

Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Water	70 - 80	18.02	-	-	7732-18-5
Trisodium citrate dihydrate	10 - 20	294.10	(2)-1323	*	6132-04-3
2,2'-Thiodiethanol	<6.0	122.19	(2)-470	*	111-48-8
Citric Acid Monohydrate	<2.0	210.14	(2)-1318	*	5949-29-1
Polyoxyethylene Lauryl Ether	<1.0	1199.54	(7)-97	*	9002-92-0
Octanoic Acid	<1.0	144.21	(2)-608	*	124-07-2

Note on ISHL No.: * in the table means announced chemical substances.

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 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 product

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

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Avoid contact with alkaline substances. Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and

scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Storage**Safe storage conditions****Storage conditions**

Store away from sunlight in well-ventilated place at room temperature (preferably cool).
Keep container tightly closed.

Safe packaging material

Polyethylene

Incompatible substances

alkaline substances

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment**Respiratory protection**

Protective mask

Hand protection

chemical protective gloves (JIS T 8116)

Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form**Color**

colorless

Turbidity

clear

Appearance

liquid

Odor

no data available

Melting point/freezing point

no data available

Boiling point, initial boiling point and boiling range

no data available

Flammability

no data available

Evaporation rate:

no data available

Flammability (solid, gas):

no data available

Upper/lower flammability or explosive limits**Upper:**

no data available

Lower:

no data available

Flash point

no data available

Auto-ignition temperature:

no data available

Decomposition temperature:

no data available

pH

3.21 - 3.29 (25°C)

Viscosity (coefficient of viscosity)

no data available

Dynamic viscosity

no data available

Solubilities

water and Ethanol : Miscible at any arbitrary ratio .

n-Octanol/water partition coefficient:(log Pow)

no data available

Vapour pressure

no data available

Specific Gravity / Relative density

no data available

Vapour density

no data available

Particle characteristics

no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity no data available
Chemical stability Stable under recommended storage conditions.

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight

Incompatible materials

alkaline substances

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides (SO_x)

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2,2'-Thiodiethanol	6610 mg/kg (Rat)	4 mg/kg (Rat)	N/A
Polyoxyethylene Lauryl Ether	300 - 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	N/A
Octanoic Acid	10080 mg/kg (Rat)	> 5 g/kg (Rabbit)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust-source information	Acute toxicity -inhalation mist-source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
2,2'-Thiodiethanol	<i>ErC50:Desmodosmus subspicatus</i> >500 mg/L 72 h	<i>LC50:Leuciscus idus</i> >10000 mg/L 96 h	<i>EC50: Daphnia magna</i> >500 mg/L 48 h
Polyoxyethylene Lauryl Ether	<i>ErC50 : Desmodosmus</i> 0.237 mg/L 72 h	N/A	N/A
Octanoic Acid	N/A	<i>LC50 : Brachydanio rerio</i> 110 mg/L 96 h <i>LC50 : Oryzias latipes</i> 310 mg/L 96 h	<i>EC50 : Daphnia magna</i> 170 mg/L 24 h

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
2,2'-Thiodiethanol	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.
Polyoxyethylene Lauryl Ether	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

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

Contaminated container and contaminated packaging

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

Section 14: TRANSPORT INFORMATION

ADR/RID	Not regulated
UN number	-

Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant Not applicable

IMDG Not regulated
UN number -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant (Sea) Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA Not regulated
UN number -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION

Japanese regulations

Fire Service Act Not applicable
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act Not applicable
Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc Priority Assessment Chemical Substances (Law Article 2, Para.5)
Regulations for the carriage and storage of dangerous goods in ship Not applicable
Civil Aeronautics Law Not applicable
Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable
Export Trade Control Order Not applicable

Section 16: OTHER INFORMATION

Key literature references and sources for data etc. NITE: National Institute of Technology and Evaluation (JAPAN)
 ://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop
 IATA dangerous Goods Regulations
 RTECS:Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

Record of SDS revisions The following contents were revised. Hazards identification. Composition/information on ingredients. Handling and storage. Stability and reactivity. Toxicological information. Ecological information. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. 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, 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.

GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet