

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision Date 29-Jan-2021
 Version 8.01

Section 1: PRODUCT AND COMPANY IDENTIFICATION

| | |
|---------------------|---|
| Product name | Anionic Surfactants Mixture Standard Solution (each 1mg/mL Methanol Solution) |
| Product code | 013-20131 |

| | |
|---|---|
| Manufacturer | FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-5964 |
| Supplier | FUJIFILM Wako Pure Chemical Corporation 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan Phone: +81-6-6203-3741 Fax: +81-6-6203-2029 |
| Emergency telephone number | +81-6-6203-3741 / +81-3-3270-8571 |
| Recommended uses and restrictions on use | For research use only |

Section 2: HAZARDS IDENTIFICATION

GHS classification**Classification of the substance or mixture****Flammable liquids**

Category 2

Acute toxicity - Oral

Category 4

Serious eye damage/eye irritation

Category 2A

Reproductive Toxicity

Category 1B

Specific target organ toxicity (single exposure)

Category 1, Category 3

Category 1 central nervous system, Visual organ, systemic toxicity

Category 3 Narcotic effects

Specific target organ toxicity (repeated exposure)

Category 1

Category 1 central nervous system, Visual organ

Pictograms**Signal word**

Danger

Hazard statements

H225 - Highly flammable liquid and vapor

H319 - Causes serious eye irritation

H302 - Harmful if swallowed

H360 - May damage fertility or the unborn child

H336 - May cause drowsiness or dizziness

H370 - Causes damage to the following organs: central nervous system, Visual organ, systemic toxicity

H372 - Causes damage to the following organs through prolonged or repeated exposure: central nervous system, Visual organ

Precautionary statements-(Prevention)

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required.
- 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
- Use only outdoors or in a well-ventilated area
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Keep cool

Precautionary statements-(Response)

- IF exposed: Call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER or doctor/physician if you feel unwell.
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
- Rinse mouth.
- In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary statements-(Storage)

- Store locked up.
- Store in a well-ventilated place. Keep container tightly closed

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 |
|-----------------------------------|----------|------------------|----------------------------|----------|------------|
| Methanol | 99.5 | 32.04 | 2-201 | 公表 | 67-56-1 |
| Sodium decylbenzenesulfonate | 0.1 | 320.42 | (3)-1884,(3)-1906,(3)-1949 | 公表 | 1322-98-1 |
| Sodium dodecylbenzenesulfonate | 0.1 | 348.48 | (3)-1949,(3)-1906,(3)-1884 | 公表 | 25155-30-0 |
| Sodium Tridecylbenzenesulfonate | 0.1 | 362.50 | (3)-1949 | 公表 | 26248-24-8 |
| Sodium Undecylbenzenesulfonate | 0.1 | 334.44 | (3)-1884,(3)-1906,(3)-1949 | 公表 | 27636-75-5 |
| Sodium tetradecylbenzenesulfonate | 0.1 | 376.52 | (3)-1884,(3)-1906,(3)-1949 | 公表 | 28348-61-0 |

Impurities and/or Additives : Not applicable

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**

Water spray (fog), Carbon dioxide (CO₂), Foam, Extinguishing powder, Sand

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. Vapors may form explosive mixture with air

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**

Highly flammable. Avoid contact with high temperature objects, spark, and strong oxidizing agents. To cut with care and wear protective gloves and protective goggles to ampoule time of the opening (Cutting method to check the label). 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

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

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

Keep container protect from light tightly closed. Store in a cool (2-10 °C) place. Packed with an inert gas.

Safe packaging material

Ampoule

Incompatible substances

Strong oxidizing agents

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

| Chemical Name | JSOH (Japan) | ISHL (Japan) | ACGIH |
|---------------------|-------------------------------|--------------|--|
| Methanol 67-56-1 | 200ppm(260mg/m ³) | 200ppm | TWA 200ppm(260mg/m ³) STEL 250ppm |

Personal protective equipment**Respiratory protection**

gas mask for organic gas

Hand protection

Impermeable protective gloves

Eye protection

protective eyeglasses or chemical safety goggles

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form**Color**

colorless

Turbidity

clear

Appearance

liquid

Odor

characteristic odor

Melting point/freezing point

-98 °C

Boiling point, initial boiling point and boiling range

64 °C

Flammability

Highly flammable liquid and vapor

Evaporation rate:

No data available

Flammability (solid, gas):

No data available

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

36.5 v/v%

Lower :

6.0 v/v%

Flash point

11 °C

Auto-ignition temperature:

464 °C

Decomposition temperature:

No data available

pH

No data available

Viscosity (coefficient of viscosity)

No data available

Dynamic viscosity

No data available

Solubilities

Alcohols , ether : freely soluble .

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

-0.74

Vapour pressure

12.3 kPa

Specific Gravity / Relative density

0.791 - 0.793

Vapour density

1.1 (air=1)

Particle characteristics

No data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity No data available
Chemical stability May be altered by light.

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

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 |
|-----------------------------------|--------------------|----------------------|------------------------------|
| Methanol | 1400 mg/kg (human) | 15800 mg/kg (rabbit) | >22500 ppm (rat) 8 h (vapor) |
| Sodium dodecylbenzenesulfonate | 438 mg/kg(Rat) | N/A | N/A |
| Sodium tetradecylbenzenesulfonate | 1460 mg/kg (Rat) | N/A | N/A |

| Chemical Name | Acute toxicity -oral- source information | Acute toxicity -dermal- source information | Acute toxicity -inhalation gas-source information |
|-----------------------------------|---|---|---|
| Methanol | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | 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 |
|-----------------------------------|--|--|--|
| Methanol | Based on the NITE GHS Classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | 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 |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Serious eye damage/ irritation

| Chemical Name | Serious eye damage/irritation source information |
|-----------------------------------|--|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Respiratory or skin sensitization

| Chemical Name | Respiratory or Skin sensitization source information |
|-----------------------------------|--|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Reproductive cell mutagenicity

| Chemical Name | germ cell mutagenicity source information |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Carcinogenicity

| Chemical Name | Carcinogenicity source information |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Reproductive toxicity

| Chemical Name | Reproductive toxicity source information |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

STOT-single exposure

| Chemical Name | STOT -single exposure- source information |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

STOT-repeated exposure

| Chemical Name | STOT -repeated exposure- source information |
|-----------------------------------|---|
| Methanol | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Aspiration hazard

| Chemical Name | Aspiration Hazard source information |
|---------------|---|
| Methanol | Based on the NITE GHS classification results. |

| | |
|-----------------------------------|---|
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | Based on the NITE GHS classification results. |

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|-----------------------------------|--|---|---|
| Sodium decylbenzenesulfonate | N/A | N/A | LC50 : <i>Daphnia magna</i> 9.55 mg/L 48 h |
| Sodium dodecylbenzenesulfonate | EC50 : <i>Microcystis</i> 0.9 mg/L 96 h | LC50 : <i>Oncorhynchus mykiss</i> 10.8 mg/L 96 h | LC50: <i>Daphnia magna</i> 3.5 mg/L 48 h |
| Sodium Tridecylbenzenesulfonate | N/A | N/A | LC50 : <i>Daphnia magna</i> 2.0 mg/L 48 h |
| Sodium Undecylbenzenesulfonate | N/A | N/A | LC50 : <i>Daphnia magna</i> 1.15 mg/L 48 h |
| Sodium tetradecylbenzenesulfonate | N/A | N/A | LC50 : <i>Daphnia magna</i> 0.59 mg/L 48 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 |
|-----------------------------------|--|---|
| Methanol | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium decylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium dodecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Tridecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium Undecylbenzenesulfonate | Based on the NITE GHS classification results. | Based on the NITE GHS classification results. |
| Sodium tetradecylbenzenesulfonate | 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 |
| Mobility | |

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

| | |
|--------------------------------|----------|
| UN number | UN1230 |
| Proper shipping name: | Methanol |
| UN classification | 3 |
| Subsidiary hazard class | 6.1 |
| Packing group | II |

Marine pollutant Not applicable

IMDG

UN number UN1230
 Proper shipping name: Methanol
 UN classification 3
 Subsidiary hazard class 6.1
 Packing group II
 Marine pollutant (Sea) Not applicable
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA

UN number UN1230
 Proper shipping name: Methanol
 UN classification 3
 Subsidiary hazard class 6.1
 Packing group II
 Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION**International Inventories**

EINECS/ELINCS -
 TSCA -

Japanese regulations

Fire Service Act Category IV, alcohols, dangerous grade 2 water-soluble
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18)
 Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9)No.560
 Class 2 Organic Solvents (Enforcement Order Attached Table No.6-2, Ordinance on Prevention of Organic Solvent Poisoning Art.1, Para.1, Item 5)
 Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
 Dangerous Substances - Flammable Substance (Enforcement Order Attached Table 1 Item 4)
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 Flammable Liquids (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Flammable Liquids (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Marine Pollution Prevention Law Enforcement ordinance Appendix No. 1 Noxious liquid substance Category Y
Pollutant Release and Transfer Register Law Not applicable
Water Pollution Control Act Not applicable
Export Trade Control Order Not applicable
Air Pollution Control Law Specified Substances

| Chemical Name | Poisonous and Deleterious Substances Control Law | Industrial Safety and Health Act Substances (Law Art.57-2) | Pollutant Release and Transfer Register Law |
|------------------------------|--|--|---|
| Methanol 67-56-1 (99.5) | - | Applicable | - |

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
<http://www.safe.nite.go.jp/japan/db.html>
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

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 Z7252(2019). *JIS: Japanese Industrial Standards

End of Safety Data Sheet