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| Title:                     | <b>Safety Data Sheet Q-NADMED Tissues and Cells</b>  |
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# 1. Product and Company Identification

## 1.1. GSH product identifier:

Q-NAD Tissues/Cells

## 1.2. Other means of identification/Catalog number:

RUO\_003, Q-NAD Tissue/Cell NAD<sup>+</sup> and NADH assay kit: quantitative assay kit for tissues and cells

## 1.3. Components:

BUFFER A (Contains Methanol), NAD<sup>+</sup> stabilization reagent (contains Hydrochloric acid), NADH stabilization reagent (contains Sodium hydroxide), BUFFER C, Buffer D (Contains Sodium Hydroxide and Sodium Dodecyl Sulfate), Assay color reagent (contains Phenazine Ethosulfate, Thiazolyl Blue Tetrazolium Bromide), NAD<sup>+</sup> and NADH Standard stocks, Positive control, Enzyme, Stop Solution (contains Sodium Dodecyl Sulfate).

## 1.4. Application of the substance/the preparation:

For Research Use Only

## 1.5. Manufacturer/Supplier:

NADMED Ltd

Haartmaninkatu 4, bldg 14

00290 Helsinki

Finland

1.6. For product related questions call: NADMED Ltd, +358 (0) 44 098 8955

1.7. Emergency information: In case of a chemical emergency call Poison Control Center in Finland (Myrkytystietokeskus) tel.: +358 (0) 800 147 111; +358 (0) 9 471 977

# 2. Hazard identification

## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Methanol (50%≤conc.≤80%, volume ≤ 50ml)

Classification for mixture at provided concentration:

H225 Flammable liquid (Category 2)

H301 Acute toxicity, Oral (Category 3)

H331 Acute toxicity, Inhalation (Category 3)

H311 Acute toxicity, Dermal (Category 3)

H370 Specific target organ toxicity - single exposure (Category 1), Eyes, Central nervous system

## 2.2 Label Elements according to reduced labelling for volumes ≤ 125 ml



Pictogram:

**2.3 Signal word:** Danger

**2.4 Hazard statements:** Highly flammable liquid and vapour, Toxic if swallowed, Toxic in contact with skin, Toxic if inhaled, Causes damage to organs if swallowed.

**2.5 Precautionary statements for storage:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**2.6 Response:** If on skin: Wash with plenty of water. If skin irritation or rash occurs: get medical attention. Take off immediately all contaminated clothing and wash it before reuse. If swallowed: Immediately call a poison center / doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center / doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. Get medical attention

**2.7 Special hazards:** None

## 3. INFORMATION ON INGREDIENTS

Extraction buffer A contains: Methanol, Chemical formula C<sub>2</sub>H<sub>5</sub>OH.

Volume: ≤ 50 ml

| Contains | CAS No.   | EC-No     | Index -No    | Content, % v/v |
|----------|-----------|-----------|--------------|----------------|
| Water    | 7732-18-5 | 231-791-2 | NA           | ≥20 %          |
| Methanol | 67-56-1   | 200-659-6 | 603-001-00-X | ≤80 %          |

## 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air. Call poison center / doctor.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water. Consult poison center / doctor if irritation persists

**In case of eye contact:** Rinse out with plenty of water for at least 15-20 min. Remove contact lenses. Consult poison center / doctor.

**If swallowed:** Immediately call a poison center / doctor.

## 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** dry chemical, foam, dry sand, carbon dioxide (CO<sub>2</sub>). Water maybe ineffective.

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible

Pay attention to flashback

Development of hazardous combustion gases or vapors that may form explosive mixtures with air.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment, and emergency procedures:** Use spark-proof tools and explosion-proof equipment. Provide exhaust ventilation or other engineering controls to keep the airbourne concentrations of vapors and mist below the applicable workplace exposure limits. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent from reaching drains, sewer or waterway. Should not be released into the environment.

**6.3 Methods and material for containment and cleaning up:** If necessary use trained response staff or contractor. Remove all sources of ignition. Contain spillage and then collect. Do not flush to sewer. Absorb with a noncombustible absorbent material such as sand or earth and containerize for disposal. Ventilate area of leak or spill. Use spark-proof tools and explosion-proof equipment. Follow proper disposal methods. Refer to section 13.

## 7. HANDLING AND STORAGE of the compound in provided concentration and amount.

**7.1 Precautions for safe handling:** Wash hands before breaks and immediately after handling the product. Avoid contact with eyes, skin and clothing. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing. Take precautions against static discharge.

**7.2 Conditions for safe storage, including incompatibilities:** Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Avoid storage near extreme heat, ignition sources or open flame. Protect from freezing and physical damage. Containers, which are opened, must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters:

67-56-1, Methanol, ACGIH: 250 ppm STEL; 200 ppm TWA

67-56-1, Methanol, NIOSH: 250 ppm STEL; 325 mg/m<sup>3</sup> STEL

67-56-1, Methanol, NIOSH: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA

**8.1 Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

**8.2 Personal Protective Measures:** If exposure limit is exceeded, a full-face respirator with organic cartridge may be worn. Wear gloves, lab coat, eye protection with side shields and impervious footwear. Contact lenses should not be worn when working with this material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES of the compound in provided concentration and amount

Methyl Alcohol 50%≤conc.≤80%% (v/v)

Appearance: Clear Colorless Liquid

Molecular Weight: 32.04 g/mol

Molecular Formula: CH<sub>3</sub>OH

pH: 7.0 - 7.5 at 10g/l at 20°C

Boiling Range: 82.5°C at 760 mmHg

Melting Point/Freezing Point: -98°C

Flash Point: 12°C

Specific Gravity/Relative Density: N/A

Odor: Faint Alcohol odor

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): Flammable

Vapor Density: 1.11

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: 128 hPa at 20°C

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: 455°C

Solubility: Miscible at 20°C.

Decomposition Temperature: N/A

#### **10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A if stored in standard ambient conditions

Chemical Stability: Stable

Conditions of Stability/Instability: Instable with sources of ignition and open flame.

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: Open flame.

Classes of Incompatible Materials: Strong oxidizers, Strong Acids, Strong Bases, Potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium.

Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

#### **11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: Toxic, irritation.

Skin: Toxic, irritation.

Inhalation: Toxic, dizziness, headache, nausea, narcosis.

Ingestion: Classified as causing damage to organs: eyes, skin, optic nerve, gastrointestinal tract, central nervous system, respiratory system, liver, spleen, kidneys and cardiovascular system.

Acute Toxicity (Numerical Measures):

Dermal: (rabbit) LD-50 15800 mg/kg

Oral: (rat) LD-50 5628 mg/kg

Inhalation: (rat) LC-50 130.7 mg/L

Carcinogenicity (NTP, IARC, OSHA): Teratogenicity: has occurred in experimental animals

Comments: Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

## 12. ECOLOGICAL INFORMATION of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: Aqueous solution has high mobility in soil.

Adverse Environmental Effects: N/A

## 13. DISPOSAL CONSIDERATIONS of the compound in provided concentration and amount.

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume cannot be disposed in drains. Dispose unused solution either into recommended disposal containers (check your local waste authorities) or allow solution to evaporate from opened bottle placed into the fume hood.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.

Waste Stream: Consult your local or regional authorities.\*

## 14. TRANSPORTATION INFORMATION

UN Number: UN1230

UN Proper Shipping Name: Methanol

Transport Hazard Class(es): 3 Flammable liquids, 6.1 Toxic substances

Packing Group Number: II

Environmental Hazards (IMDG code): ADR/RID: No Marine Pollutant: No IATA: No

Transport in Bulk (IBC Code): N/A

Special Transport Precautions: N/A

## 15. REGULATIONS

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:** This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation:

Seveso III: Directive 2012/18/EU of the European: Flammable Liquids

Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Hydrochloric acid (< 0.5%), volume ≤10 ml – not a hazard substance at this concentration and amount

### 2.2 Label Elements



Pictogram: None

**2.3 Signal word:** None

**2.4 Hazard statements:** None.

**2.5 Precautionary statements:** None

**2.6 Response:** None

**2.7 Special hazards:** None

### 3. INFORMATION ON INGREDIENTS

NAD<sup>+</sup> stabilization reagent contains: Hydrochloric acid, Chemical formula - HCl

Volume: ≤ 10 ml

| Contains          | CAS No.   | EC-No     | Index -No    | Content |
|-------------------|-----------|-----------|--------------|---------|
| Water             | 7732-18-5 | 231-791-2 | NA           | >99.5%  |
| Hydrochloric acid | 7647-01-0 | 231-595-7 | 017-002-01-X | <0.5 %  |

### 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.

**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.

**If swallowed:** Harmful if swallowed. Irritating to mouth, throat, and stomach. Rinse mouth with water. Consult a physician.

### 5. FIRE FIGHTING MEASURE

**5.1 Suitable extinguishing agents:** dry chemical, water, carbon dioxide (CO<sub>2</sub>) dry powder

**5.2 Special hazards arising from the substance or mixture:** Hydrogen Chloride gas

### 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment, and emergency procedures:** Avoid breathing vapors, mist, gas. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so. 6.3  
Methods and material for containment and cleaning up: Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:** Store in a cool place. 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.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA PEL / NIOSH REL / ACGIH TLV: 5 ppm (7 mg/m<sup>3</sup> as a ceiling limit)

EU Commission Directive 2000/39/EC: 8 hours – 5 ppm (8 mg/m<sup>3</sup>) / Short term 10 ppm (15 mg/m<sup>3</sup>)

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**8.3 Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES of the compound in provided concentration and amount

Appearance: Colorless Liquid

Molecular Weight: 36.45 g/mol

Molecular Formula: HCl

pH: 1-2

Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

#### **10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under recommended handling and storage conditions

Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Classes of Incompatible Materials: amines, alkalis or metals such as copper, brass, zinc, potassium, and sodium.

Hazardous Decomposition Products: Products formed under fire conditions: toxic gases and vapors such as chlorine.

#### **11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: Irritation.

Skin: Irritation.

Inhalation: May be harmful. Destructive for mucous membranes.

Ingestion: May be harmful. Can cause burns.

Acute Toxicity (Numerical Measures): N/A

Carcinogenicity (NTP, IARC, OSHA): Not listed as a carcinogen.

**12. ECOLOGICAL INFORMATION** of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

**13. DISPOSAL CONSIDERATIONS** of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains.

Special precautions: Dispose of small amounts of spilled material described in section 6.

**14. TRANSPORTATION INFORMATION**

In accordance with DOT: Not regulated for transport.

In accordance with IMDG: Not regulated for transport.

In accordance with IATA: Not regulated for transport.

In accordance with TDG: Not regulated for transport.

Further information: Not dangerous according to the above specifications.

**15. REGULATIONS**

This safety data sheet complies with the requirements of Regulation (EC) No. 2015/830

**16. OTHER INFORMATION**

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or

completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Sodium hydroxide (< 0.5%), volume ≤10 ml – not a hazardous substance at this concentration and volume

H290 May be corrosive to metals

### 2.2 Label Elements according to Reduced Labeling for volumes ≤ 125 ml

Pictogram: None

**2.3 Signal word:** Warning

**2.4 Hazard statements:** None.

**2.5 Precautionary statements:** None

**2.6 Response:** None

**2.7 Special hazards:** None

## 3. INFORMATION ON INGREDIENTS

NADH stabilization reagent contains: Sodium hydroxide, Chemical formula - NaOH

Volume: ≤ 10 ml

| Contains         | CAS No.   | EC-No     | Index -No    | Content |
|------------------|-----------|-----------|--------------|---------|
| Water            | 7732-18-5 | 231-791-2 | NA           | >99.5%  |
| Sodium hydroxide | 1310-73-2 | 215-185-5 | 011-002-00-6 | <0.5 %  |

## 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.

**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.

**If swallowed:** Harmful if swallowed. Irritating to mouth, throat, and stomach. Rinse mouth with water. Consult a physician.

## 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For this mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture:** Sodium oxides, ambient fire may liberate hazardous vapors.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment, and emergency procedures:** Avoid breathing vapors, mist, gas. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:** Store in a cool place in original bottle. 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.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**8.3 Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

**9. PHYSICAL AND CHEMICAL PROPERTIES** of the compound in provided concentration and amount

Appearance: Colorless Liquid

Molecular Weight: 39.99 g/mol

Molecular Formula: HCl

pH: 11-12

Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

**10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under recommended handling and storage conditions

Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Classes of Incompatible materials: metals

Hazardous Decomposition Products: Products formed under fire conditions: toxic gases and vapors.

**11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: May cause irritation.

Skin: May cause irritation.

Inhalation: May be harmful.

Ingestion: May be harmful.

Acute Toxicity (Numerical Measures): N/A

Carcinogenicity (NTP, IARC, OSHA): N/A

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded, but are unlikely when the product is handled appropriately.

**12. ECOLOGICAL INFORMATION** of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

**13. DISPOSAL CONSIDERATIONS** of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains.

Special precautions: Dispose of small amounts of spilled material described in section 6.

**14. TRANSPORTATION INFORMATION**

In accordance with DOT: Not regulated for transport.



In accordance with IMDG: Not regulated for transport.

In accordance with IATA: Not regulated for transport.

In accordance with TDG: Not regulated for transport.

Further information: Not dangerous according to the above specifications.

## 15. REGULATIONS

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 16. OTHER INFORMATION

H290 May be corrosive to metal

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Sodium hydroxide ( $0.5\% \leq \text{conc} \leq 1\%$ , volume  $\leq 12$  ml)

H290 Corrosive to metals

Classification for mixture at provided concentration:

H315 Skin irritation (Category 2)

H319 Causes serious eye irritation

### 2.2 Label Elements according to reduced labelling for volumes $\leq 125$ ml



Pictogram:

**2.3 Signal word:** Warning

**2.4 Hazard statements:** May be corrosive to metals. Causes skin irritation. Causes serious eye irritation.

**2.5 Precautionary statements for storage:** Keep only in original container. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

**2.6 Response:** If on skin: Wash with plenty of water. If skin irritation or rash occurs: get medical attention. Take off immediately all contaminated clothing and wash it before reuse. 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 attention.

**2.7 Special hazards:** None

**3. INFORMATION ON INGREDIENTS**

Buffer D contains: Sodium Hydroxide, Chemical formula NaOH.

Volume: ≤ 12 ml

| Contains         | CAS No.   | EC-No     | Index -No | Content, % v/v |
|------------------|-----------|-----------|-----------|----------------|
| Water            | 7732-18-5 | 231-791-2 | NA        | ≥98 %          |
| Sodium Hydroxide | 1310-73-2 | 215-185-5 | NA        | ≤1 %           |

**4. FIRST AID MEASURES**

**General advice:** First aider needs to protect himself. Take off all contaminated clothing immediately.

**If inhaled:** If inhaled, remove to fresh air. If symptoms persist, call a physician.

**In case of skin contact:** After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.

**In case of eye contact:** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

**If swallowed:** When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

## 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** Water spray Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**5.2 Special hazards arising from the substance or mixture:** The product is not flammable. Fire may cause evolution of: Sodium oxides

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment, and emergency procedures:** Wear personal protective equipment. Unprotected persons must be kept away. Provide adequate ventilation. Avoid contact with skin and eyes.

**6.2 Environmental Precautions:** Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

**6.3 Methods and material for containment and cleaning up:** Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Protection against fire and explosion by normal measures for preventive fire protection.

**7.2 Conditions for safe storage, including incompatibilities:** Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear.

**8.3 Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES of the compound in provided concentration and amount

Appearance: Colorless Liquid

Molecular Weight: 39.99 g/mol

Molecular Formula: NaOH

pH: 10

Boiling Range: 100°C at 1,013 hPa

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

## 10. STABILITY AND REACTIVITY of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under recommended handling and storage conditions

Hazardous Reactions: Corrosive in contact with metals Hazardous polymerisation does not occur.

Classes of Incompatible materials: Aluminium, Tin, Zinc,

Hazardous Decomposition Products: Sodium oxides

## 11. TOXICOLOGICAL INFORMATION of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: Irritation.

Skin: Irritation.

Inhalation: N/A

Ingestion: N/A

Acute Toxicity (Numerical Measures): N/A

Carcinogenicity (NTP, IARC, OSHA): N/A

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Hazardous properties cannot be excluded, but are unlikely when the product is handled appropriately.

## 12. ECOLOGICAL INFORMATION of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: Mobility in soil likely due to solubility into water. Do not flush into surface water or sanitary sewer system.

Adverse Environmental Effects: N/A

## 13. DISPOSAL CONSIDERATIONS of the compound in provided concentration and amount.

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

## 14. TRANSPORTATION INFORMATION

In accordance with DOT: UN/ID No.: UN 1824, Proper shipping name : SODIUM HYDROXIDE SOLUTION, Class 8, Packing group III, Hazard Labels 8

In accordance with IMDG: UN/ID No.: UN 1824, Description of the goods : SODIUM HYDROXIDE SOLUTION, Class : 8, Packaging group : III, Hazard Labels : 8, EmS Number : F-A, S-B, Marine pollutant : no

In accordance with IATA: UN/ID No.: UN 1824, Description of the goods : SODIUM HYDROXIDE SOLUTION, Class : 8, Packaging group : III, Hazard Labels : 8, Packing instruction (cargo aircraft) : 856, Packing instruction (passenger aircraft) : 852, Packing instruction (passenger aircraft) : Y841

## 15. REGULATIONS

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

## 16. OTHER INFORMATION

H290 May be corrosive to metal

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Sodium Dodecyl Sulfate (concentration 0.5%<conc.<2%, volume ≤ 12 ml)  
Classification for solution with concentration 0.5%<conc.<2%:

H315 Skin irritation

H319 Serious eye irritation

**2.2 Label Elements according to reduced labelling for volumes ≤ 125 ml**



Pictogram:

**2.3 Signal word:** Warning

**2.4 Hazard statements:** H315 Skin irritation, H319 Serious eye irritation

**2.5 Precautionary statements:** Wear protective gloves. Wear eye protection, face protection.

**2.6 Response:** 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. Do not eat, drink or smoke when using this product. Collect spillage.

**2.7 Special hazards:** None

### 3. INFORMATION ON INGREDIENTS

Buffer D contains: Sodium Dodecyl Sulfate, Chemical formula  $\text{CH}_3(\text{CH}_2)_{11}\text{OSO}_3\text{Na}$

Volume  $\leq 12$  ml

| Contains               | CAS No.   | EC-No     | Index -No | Content    |
|------------------------|-----------|-----------|-----------|------------|
| Water                  | 7732-18-5 | 231-791-2 | NA        | >98 %      |
| Sodium Dodecyl Sulfate | 151-21-3  | 205-788-1 | NA        | $\leq 1$ % |

### 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.

**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** use water spray, dry chemical or carbon dioxide

#### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Sodium oxides

Sulfur oxides

### 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Avoid breathing vapors, aerosols. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal. Clean up affected area.

**7. HANDLING AND STORAGE** of the compound in provided concentration and amount

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:** Store tightly closed in original bottle at ambient temperature.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear.

**9. PHYSICAL AND CHEMICAL PROPERTIES** of the compound in provided concentration and amount

Appearance: Colorless Liquid

Molecular Weight: 288.38 g/mol

Molecular Formula:  $\text{CH}_3(\text{CH}_2)_{11}\text{OSO}_3\text{Na}$

pH: N/A

Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A



Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

#### **10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under standard ambient conditions

Conditions of Stability/Instability: N/A

Hazardous Reactions: N/A

Conditions to avoid: N/A

Classes of Incompatible Materials: Oxidizing agents

Hazardous Decomposition Products: In the event of fire: see section 5.

#### **11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: Cause irritation.

Skin: May cause irritation.

Acute Toxicity (Numerical Measures): N/A

Additional information: To the best of our knowledge the chemical, physical and toxicological properties of this compound as solution of given concentration have not been thoroughly investigated. Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Comments: Handle in accordance with good industrial hygiene and safety practice.

#### **12. ECOLOGICAL INFORMATION** of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

**13. DISPOSAL CONSIDERATIONS** of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains in ambient conditions.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.

Waste Stream: Consult your local or regional authorities.\*

#### 14. TRANSPORTATION INFORMATION

UN Number: -

UN Proper Shipping Name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

#### 15. REGULATIONS

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

#### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

#### 16. OTHER INFORMATION

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named

supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Thiazolyl Blue Tetrazolium Bromide (concentration <0.15%), volume ≤ 10ml – not a hazardous substance at given concentration and amount

Classification for pure solid compound:

H315 Skin irritation

H319 Eye irritation

H335 May cause respiratory irritation

H341 Suspected of causing genetic defects

### 2.2 Label Elements according to reduced labelling for volumes ≤ 125 ml

Pictogram: None

**2.3 Signal word:** Warning

**2.4 Hazard statements:** H341 Pure compound in solid form is suspected of causing genetic defects.

**2.5 Precautionary statements:** Wear protective gloves. Wear eye protection, face protection. Do not breathe vapors. Do not eat, drink, or smoke when using this product. Collect spillage.

**2.6 Response:** If on skin: Wash with plenty of water. If skin irritation or rash occurs: get medical attention. Take off all contaminated clothing and wash it before reuse. 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 attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water. In case of fire: Use water, dry chemical, CO<sub>2</sub> or foam to extinguish.

**2.7 Special hazards:** None

## 3. INFORMATION ON INGREDIENTS

Assay color reagent contains: Thiazolyl Blue Tetrazolium Bromide, Chemical formula C<sub>18</sub>H<sub>16</sub>BrN<sub>5</sub>S

Volume: 6 ml (2 x 3 ml)

| Contains                                 | CAS No.   | EC-No     | Index -No | Content  |
|--|-----------|-----------|-----------|----------|
| Water                                    | 7732-18-5 | 231-791-2 | NA        | >99.85 % |
| Thiazolyl Blue<br>Tetrazolium<br>Bromide | 298-93-1  | 206-069-5 | N/A       | <0.15 %  |

#### 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air.

**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.

**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.

**If swallowed:** Immediately rinse mouth with water. Consult a physician.

#### 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** water spray, foam, carbon dioxide (CO<sub>2</sub>) dry powder

##### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides

Sulfur oxides

Hydrogen bromide gas

Development of hazardous combustion gases or vapours possible in the event of fire

#### 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Avoid breathing vapors, mist, gas. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE** of the compound in provided concentration and amount

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:**

Recommended storage temperature -20 °C.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**9. PHYSICAL AND CHEMICAL PROPERTIES** of the compound in provided concentration and amount

Appearance: Yellow Liquid

Molecular Weight: 414.32 g/mol

Molecular Formula: C<sub>18</sub>H<sub>16</sub>BrN<sub>5</sub>S

pH: N/A

Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Yellow

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

#### **10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A if stored in recommended conditions

Chemical Stability: Stable under recommended storage and handling conditions

Conditions of Stability/Instability: N/A

Hazardous Reactions: N/A

Conditions to avoid: N/A

Classes of Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: In the event of fire: see section 5

#### **11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: May cause irritation.

Skin: May cause irritation.

Respiratory system: May cause irritation.

Acute Toxicity (Numerical Measures): N/A

Additional information: To the best of our knowledge the chemical, physical and toxicological properties of this compound as solution of given concentration have not been thoroughly investigated. Hazardous properties cannot be excluded, but are unlikely when the product is handled appropriately.

Comments: Handle in accordance with good industrial hygiene and safety practice.

#### **12. ECOLOGICAL INFORMATION** of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

**13. DISPOSAL CONSIDERATIONS** of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains in ambient conditions.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.

Waste Stream: Consult your local or regional authorities.\*

#### 14. TRANSPORTATION INFORMATION

UN Proper Shipping Name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

#### 15. REGULATIONS

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:** This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

#### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

#### 16. OTHER INFORMATION

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and

should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Phenazine Ethosulfate (concentration <0.5%), volume ≤ 10ml – not a hazardous substance at given concentration and amount

Classification for pure solid compound:

H315 Skin irritation

H319 Eye irritation

**2.2 Label Elements according to reduced labelling for volumes ≤ 125 ml**

Pictogram: None

**2.3 Signal word:** Warning

**2.4 Hazard statements:** None

**2.5 Precautionary statements:** Wear protective gloves. Wear eye protection, face protection.

**2.6 Response:** 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. Do not eat, drink or smoke when using this product. Collect spillage.

**2.7 Special hazards:** None

## 3. INFORMATION ON INGREDIENTS

Assay color reagent contains: Phenazine Ethosulfate, Chemical formula C<sub>16</sub>H<sub>18</sub>N<sub>2</sub>SO<sub>4</sub>

Volume: total 6 ml (2 x 3ml)

| Contains              | CAS No.    | EC-No     | Index -No | Content |
|-----------------------|------------|-----------|-----------|---------|
| Water                 | 7732-18-5  | 231-791-2 | NA        | >99.5 % |
| Phenazine ethosulfate | 10510-77-7 | 234-044-9 | NA        | <0.5 %  |

## 4. FIRST AID MEASURES

**General advice:** Show this product safety data sheet to the doctor in attendance.

**If inhaled:** After inhalation: fresh air.



**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.

**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE FIGHTING MEASURES

**5.1 Suitable extinguishing agents:** use water spray, dry chemical or carbon dioxide

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides

Sulfur oxides

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Avoid breathing vapors, mist, gas. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE of the compound in provided concentration and amount

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:** Recommended storage temperature -20°C.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear.

**9. PHYSICAL AND CHEMICAL PROPERTIES** of the compound in provided concentration and amount

Appearance: Yellow Liquid

Molecular Weight: 334.39 g/mol

Molecular Formula: C<sub>16</sub>H<sub>18</sub>N<sub>2</sub>SO<sub>4</sub>

pH: N/A

Boiling Range: 100°C

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Yellow

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

**10. STABILITY AND REACTIVITY** of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under recommended storage conditions

Conditions of Stability/Instability: N/A

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Conditions to avoid: N/A

Classes of Incompatible Materials: N/A

Hazardous Decomposition Products: In the event of fire: see section 5.

### **11. TOXICOLOGICAL INFORMATION** of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: May cause irritation.

Skin: May cause irritation.

Acute Toxicity (Numerical Measures): N/A

Additional information: To the best of our knowledge the chemical, physical and toxicological properties of this compound as solution of given concentration have not been thoroughly investigated.

### **12. ECOLOGICAL INFORMATION** of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

### **13. DISPOSAL CONSIDERATIONS** of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains in ambient conditions.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.

Waste Stream: Consult your local or regional authorities.\*

## 14. TRANSPORTATION INFORMATION

UN Number: -

UN Proper Shipping Name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

## 15. REGULATIONS

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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## 2. HAZARD IDENTIFICATION

**2.1 Classification:** Regulation, (EC) No. 1272/2008 [CLP/GSH].

Mixture contains Sodium Dodecyl Sulfate (concentration 10%<conc.<15%), volume ≤ 5 ml  
Classification for solution with concentration 10%<conc.<20%:

H315 Skin irritation

H319 Serious eye irritation

**2.2 Label Elements according to reduced labelling for volumes ≤ 125 ml**

Pictogram:

**2.3 Signal word:** Warning**2.4 Hazard statements:** H315 Skin irritation, H319 Serious eye irritation**2.5 Precautionary statements:** Wear protective gloves. Wear eye protection, face protection.**2.6 Response:** 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. Do not eat, drink or smoke when using this product. Collect spillage.**2.7 Special hazards:** None**3. INFORMATION ON INGREDIENTS**Stop solution contains: Sodium Dodecyl Sulfate, Chemical formula  $\text{CH}_3(\text{CH}_2)_{11}\text{OSO}_3\text{Na}$ 

Volume &lt;5 ml

| Contains               | CAS No.   | EC-No     | Index -No | Content |
|------------------------|-----------|-----------|-----------|---------|
| Water                  | 7732-18-5 | 231-791-2 | NA        | >85 %   |
| Sodium Dodecyl Sulfate | 151-21-3  | 205-788-1 | NA        | <15 %   |

**4. FIRST AID MEASURES****General advice:** Show this product safety data sheet to the doctor in attendance.**If inhaled:** After inhalation: fresh air.**In case of skin contact:** Take off immediately all contaminated clothing. Rinse skin with plenty of water.**In case of eye contact:** Rinse out with plenty of water. Remove contact lenses. Consult an ophthalmologist.**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**5. FIRE FIGHTING MEASURES****5.1 Suitable extinguishing agents:** use water spray, dry chemical or carbon dioxide**5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Sodium oxides

Sulfur oxides

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Avoid breathing vapors, aerosols. Ensure adequate ventilation. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**6.2 Environmental Precautions:** Prevent further spillage or leakage if safe to do so.

**6.3 Methods and material for containment and cleaning up:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Keep in suitable, closed containers for disposal. Clean up affected area.

## 7. HANDLING AND STORAGE of the compound in provided concentration and amount

**7.1 Precautions for safe handling:** Do not breathe vapors or mist. Use in a dry and well-ventilated working space. Avoid contact with eyes and skin. Use appropriate personal protective equipment to prevent contamination of skin, eyes, and personal clothing.

**7.2 Conditions for safe storage, including incompatibilities:** Store tightly closed in original bottle at ambient temperature.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**8.1 Engineering Controls:** Use in a well-ventilated working area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**8.2 Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear.

## 9. PHYSICAL AND CHEMICAL PROPERTIES of the compound in provided concentration and amount

Appearance: Colorless Liquid

Molecular Weight: 288.38 g/mol

Molecular Formula:  $\text{CH}_3(\text{CH}_2)_{11}\text{OSO}_3\text{Na}$

pH: N/A

Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

## 10. STABILITY AND REACTIVITY of the compound in provided concentration and amount

Reactivity: N/A

Chemical Stability: Stable under standard ambient conditions

Conditions of Stability/Instability: N/A

Hazardous Reactions: N/A

Conditions to avoid: N/A

Classes of Incompatible Materials: Oxidizing agents

Hazardous Decomposition Products: In the event of fire: see section 5.

## 11. TOXICOLOGICAL INFORMATION of the compound in provided concentration and amount

Likely Routes of Exposure

Eyes: Cause irritation.

Skin: May cause irritation.

Acute Toxicity (Numerical Measures): N/A

Additional information: To the best of our knowledge the chemical, physical and toxicological properties of this compound as solution of given concentration have not been thoroughly investigated. Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Comments: Handle in accordance with good industrial hygiene and safety practice.

## 12. ECOLOGICAL INFORMATION of the compound in provided concentration and amount

Ecotoxicity: N/A

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

## 13. DISPOSAL CONSIDERATIONS of the compound in provided concentration and amount

Recommended Disposal Containers: Check with your local waste authorities\*

Recommended Disposal Methods: Solution in provided concentration and volume can be disposed in drains in ambient conditions.

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.

Waste Stream: Consult your local or regional authorities.\*

## 14. TRANSPORTATION INFORMATION

UN Number: -

UN Proper Shipping Name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

## 15. REGULATIONS

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:



This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

## 16. OTHER INFORMATION

Notice to reader

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. To the best of our knowledge, information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## 3. Comments

The original document was written by CSO Liliya Euro, PhD