

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

| | |
|------------------------|---|
| Product name: | One-step Dewaxing/Antigen Retrieval Buffer(pH6.0)(20× |
| Catalog Number: | E-IR-R221A |
| Application | For research use only |

SECTION 2 HAZARDS IDENTIFICATION

| Component Items | Physical form | Hazardous Ingredient | Concentration | CAS No. |
|---|--------------------------------|--------------------------------|---------------|------------|
| One-step Dewaxing/Antigen Retrieval Buffer(pH6.0)(20× | Sodium dodecylbenzenesulfonate | Odorless and colorless, liquid | 0.05% | 25155-30-0 |
| | Triton-X-100 | Odorless and colorless, liquid | 2% | 9002-93-1 |
| | Tetrahydrofurfuryl alcohol | Odorless and colorless, liquid | 1% | 97-99-4 |

2.1 HAZARD STATEMENT

Classification according to GHS

2.1.1 Sodium dodecylbenzenesulfonate

H302: Harmful if swallowed.

H315: Causes skin irritation.

H318: Causes serious eye damage.

2.1.2 Triton-X-100

H302: Harmful if swallowed.

H316: Causes mild skin irritation

H319 : Causes serious eye irritation

2.1.2 Tetrahydrofurfuryl alcohol

H316: Causes mild skin irritation

H361: Suspected of damaging fertility or the unborn child (state specific effect if known)(state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

2.2 PRECAUTION STATEMENT

Classification according to GHS

2.2.1 Sodium dodecylbenzenesulfonate

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330: IF SWALLOWED, call a POISON CENTER/doctor; if you feel unwell, Rinse mouth.

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P305 + P351 + P338 + P310: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.2.2 Triton-X-100

P264:post-operation Thoroughly clean skin

P270:Do not eat, drink or smoke when using this product

P273: Avoid release to the environment.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330: IF SWALLOWED, call a POISON CENTER/doctor; if you feel unwell, Rinse mouth.

P305 + P351 + P338 + P310: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If you still feel eye irritation,seek medical advice/treatment.

P391: Collect spillage.

P501: Dispose of contents/containers to an approved waste treatment plant.

2.2.3 Tetrahydrofurfuryl alcohol

P201: Obtain special instructions before use.

P202: Do not operate until all safety precautions have been read.

P210: Keep away from heat sources, sparks, open flames and hot surfaces- No Smoking.

P264: Avoid release to the environment.

P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338: IF IN EYES, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313: In case of contact or doubt, seek medical advice/treatment.

P337+P313: If you still feel eye irritation, seek medical advice/treatment.

P370 + P378: In case of fire: put out the fire with dry sand, dry powder or water-resistant foam.

P403 + P235: Keep low temperature and store in a well ventilated place.

P405: Store locked up.

P501: Dispose of contents/containers to an approved waste treatment plant.

SECTION 3 INFORMATION ON INGREDIENTS

| Ingredient | Formula | Concentration | CAS No. |
|--------------------------------------|---|---------------|------------|
| Water | H ₂ O | 84.33% | 7732-18-5 |
| Sodium dodecylbenzenesulfonate | C ₁₈ H ₂₉ NaO ₃ S | 0.05% | 25155-30-0 |
| Triton-X-100 | / | 2% | 9002-93-1 |
| Tetrahydrofurfuryl alcohol | C ₅ H ₁₀ O ₂ | 1% | 97-99-4 |
| Citric acid trisodium salt dihydrate | C ₆ H ₅ O ₇ Na ₃ •2H ₂ O | 5% | 6132-04-3 |

SECTION 4 FIRST-AID MEASURES

4.1 General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2 If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

4.3 In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

4.4 In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

4.5 If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Suitable: Water spray, alcohol-resistant foam, dry chemical, carbon dioxide or appropriate foam.

For small fires, use media such as "alcohol" foam, dry chemical or carbon dioxide.

For large fires, apply water from as far as possible. Use large quantities of water applied as a mist or spray. Solid streams of water may be ineffective. Cool affected containers with flooding quantities of water.

5.2 Special precautions for fire-fighters

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.3 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides, Hydrogen chloride gas.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Person-related safety precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.2 Measures for environmental protection

Prevent further leakage or spillage if safe to do so. Do not let enter drains. Discharge into the environment must be avoided.

6.3 Measures for containment and cleaning

Contain spillage, and then collect with non-combustible absorbent material (eg. sand, diatomaceous earth, vermiculite). Place in a container for disposal according to local regulations. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 HANDLING AND STORAGE

7.1 Handling

- Wear appropriate protective clothing and safety gloves.
- Avoid inhalation.
- Avoid contact with eyes, skin and clothing.
- Mechanical exhaust required.
- Keep away from ignition sources, heat and flame.
- No smoking at working site.
- Incompatibilities: Strong oxidizing agents, Strong acids. Handling and unloading should be light, to prevent packaging broken, damp and cause losses.
- Working place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

7.2 Storage

- Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
- Keep away from heat, sparks and flame.
- Keep away from sources of ignition.
- Incompatible: Strong oxidizing agents, Strong acids.
- Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION 8 EXPOSURE CONTROL/PPE

8.1 Engineering Controls

Mechanical exhaust required. Safety shower and eye bath.

8.2 Personal Protective Equipment

- Respiratory: Government approved respirator if needed.
- Eye/face: Chemical safety goggles if needed.
- Clothing: Wear appropriate protective clothing.
- Hand/skin: Protective gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Body protection: Wear suitable protective clothing according to the concentration and amount of the substance at the workplace.

8.3 Other Protect

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

9.1 PHYSICAL/CHEMICAL PROPERTIES

Appearance: Colorless liquid

Odor: None

Melting point/melting range: Untested

Boiling point/boiling range: Untested

Flash point: Untested

Autoignition temperature: Untested
Decomposition temperature: Untested
Evaporation rate: Untested
Flammability: Untested
Upper explosion limit: Untested
Lower explosion limit: Untested
Vapor pressure: Untested
Relative density: Untested
Specific gravity: Untested
Solubility: Untested
Partition coefficient: Untested
Explosive properties: Untested

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials

Strong oxidizing agent, Light sensitive, Alcohols, Organic materials, Heavy metals, Powdered metals, Strong reducing agents, Amines, Mercaptans.

10.6 Hazardous decomposition products

Other decomposition products: No data available

Hazardous decomposition products formed under fire conditions: Carbon oxides, Nitrogen oxides (NO_x), Sulphur oxides, Hydrogen chloride gas.

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Acute toxicity:

Sodium dodecylbenzenesulfonate

Acute toxicity

LD₅₀ Oral - Rat - 1260 mg/kg

Skin corrosion/irritation: No data available

Respiratory or skin sensitisation: No data available.

Carcinogenicity: No data available

Triton-X-100

Acute toxicity

LD50 Oral - Rat - 1800 mg/kg

LD50 Oral - Rabbit - 8000 mg/kg

Skin corrosion/irritation: No data available

Respiratory or skin sensitisation: No data available.

Carcinogenicity: No data available

Tetrahydrofurfuryl alcohol

Acute toxicity

LD50 Oral - Rat - 2000 mg/kg

Skin corrosion/irritation: No data available

Respiratory or skin sensitisation: No data available.

Carcinogenicity: No data available

SECTION 12 ECOLOGICAL INFORMATION

12.1 Toxicity:

Ecotoxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects

No data available

SECTION 13 DISPOSAL CONSIDERATION

13.1 Disposal methods

Dispose of waste in accordance to applicable national, regional, or local regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

13.2 Contaminated packaging

Dispose in the same manner as unused product.

SECTION 14 TRANSPORT INFORMATION

RID/ADR: Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA: Non-Hazardous for Air Transport.

IMO: Non-Hazardous for Sea Transport.

SECTION15 REGULATORY INFORMATION

This material safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008 and its amendments.

SECTION 16 OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.