

seqWell Reagent List

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Magwise Solution W/Beads
Other means of identification : MG5000, MG10000, 101002, 101003

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Laboratory use/Manufacturing component/Research

1.3. Details of the supplier of the safety data sheet

seqWell, Inc.
66 Cherry Hill Dr.
Beverly, 01915 - USA
T 855-737-9355
www.seqwell.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

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5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- | | |
|--------------------------------|---|
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- | | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

- | | |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area. |

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- | | |
|-------------------------|--|
| Methods for cleaning up | : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. |
|-------------------------|--|

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- | | |
|-------------------------------|---|
| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor. |
|-------------------------------|---|

7.2. Conditions for safe storage, including any incompatibilities

- | | |
|------------------------|---|
| Storage conditions | : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight.
Keep container closed when not in use. |
| Incompatible products | : Strong bases. strong acids. |
| Incompatible materials | : Sources of ignition. Direct sunlight. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

- | | |
|-------------------------------|---|
| Personal protective equipment | : Avoid all unnecessary exposure. |
| Hand protection | : Wear protective gloves. |
| Eye protection | : Chemical goggles or safety glasses. |
| Respiratory protection | : Wear approved mask. |
| Other information | : When using, do not eat, drink or smoke. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- | | |
|---|---------------------|
| Physical state | : Liquid |
| Color | : brown. |
| Odor | : characteristic. |
| Odor threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Melting point | : No data available |

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Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Magwise Solution W/Beads

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Magwise Solution W/Beads

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description : UN N/A

Packing group (ADR) : N/A

Hazard identification number (Kemler No.) : N/A

Classification code (ADR) : N/A

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

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SECTION 16: Other information

Other information : None.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Mixture
Trade name	: TnX Read 1 Tagging Reagent, Tagmentation Enhancer, Read 2 Adaptor, Diluent, UDI Index Primers
Other means of identification	: Part numbers: 301424, 301433, 301477, 301481, 301432, 301455, 301431, 301427, 301435, 301429

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: Laboratory use/Manufacturing component/Research
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1.3. Details of the supplier of the safety data sheet

seqWell, Inc.
66 Cherry Hill Dr.
Beverly, 01915 - USA
T 855-737-9355
www.seqwell.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
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4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
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Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight.
Keep container closed when not in use.

Incompatible products : Strong bases. strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear approved mask.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless.

Odor : characteristic.

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1) : No data available

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Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

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Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

TnX Read 1 Tagging Reagent, Ligation Enhancer, Read 2 Adaptor, Diluent, UDI Index Primers

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

TnX Read 1 Tagging Reagent, Ligation Enhancer, Read 2 Adaptor, Diluent, UDI Index Primers

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description : UN N/A

Packing group (ADR) : N/A

Hazard identification number (Kemler No.) : N/A

Classification code (ADR) : N/A

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

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SECTION 16: Other information

Other information : None.

SDS US (GHS HazCom 2012)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Ligase
Product code : Part Numbers 301469, 301448

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture : Laboratory use. Restricted to professional users.
Uses Advised Against : In vivo.

1.3. Details of the supplier of the safety data sheet

seqWell, Inc.
66 Cherry Hill Dr.
Beverly, 01915 - USA
T 855-737-9355
www.seqwell.com

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Hazardous Ingredients: Glycerol, CAS: 56-81-5, %w/w: 40-60%

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
First-aid measures after inhalation : In case of discomfort: bring the person into fresh air.
First-aid measures after skin contact : Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
First-aid measures after eye contact : Rinse gently with lukewarm water. Remove any contact lenses if this is easy to do. Continue rinsing. In case of persistent eye irritation or discomfort: Seek medical help.
First-aid measures after ingestion : Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Bring this Safety Data Sheet.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Alcohol-resistant foam, carbon dioxide, powder, water mist.
- Unsuitable extinguishing media : Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire extinguishing water to enter the sewage system and nearby surface waters. If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced.

Hazardous combustion products: Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

- Firefighting instructions : Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ensure adequate ventilation, especially in confined areas. Contaminated areas may be slippery.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
- Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

7.2. Conditions for safe storage, including any incompatibilities

- Recommended Storage Material : Keep only in original packaging.
- Storage Temperature : -25 °C to -15 °C
- Incompatible Materials : No specific requirements.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol

Long term exposure limit (OSHA Table Z-1) (mg/m³): 15 (total dust) / 5 (Respirable fraction)

Long term exposure limit (NIOSH REL) (mg/m³): 10

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

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8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General Recommendations	: When handling chemical products, do not eat, drink or smoke.
Exposure Scenarios	: There are no exposure scenarios implemented for this product.
Exposure Limits	: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
Appropriate Technical Measures	: The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene Measures	: Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse.
Measures to avoid environmental exposure	: No specific requirements.

Individual protection measures, such as personal protective equipment

Generally	: Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).
Respiratory Equipment	: If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.
Skin Protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent). Appropriate techniques should be used to remove used gloves and contaminated clothing.
Hand Protection	: Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves.
Eye Protection	: Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear
Odor	: None
Odor threshold	: No data available
pH	: 7.5
Density (g/cm ³)	: No data available
Relative density	: No data available
Kinematic viscosity	: No data available
Particle characteristics	: No data available
Phase Changes	
Melting point (°F)	: No data available
Softening point/range (waxes and pastes) (°F):	: Does not apply to liquids
Boiling point (°F)	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Decomposition temperature (°F)	: No data available
Data on fire and explosion hazards	
Flash point (°F)	: No data available
Flammability (°F)	: No data available
Auto-ignition temperature (°F)	: No data available
Explosion limits (%v/v)	: No data available

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Solubility

Solubility in water : No data available

n-octanol/water coefficient (LogKow) : No data available

Solubility in fat (g/L): : No data available

Other information : No data available

Evaporation rate (n-butylacetate = 100) : No data available

Other physical and chemical parameters : No data available

Oxidizing properties : No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive under recommended handling and storage conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4. Conditions to avoid

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5. Incompatible materials

No specific requirements

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Ingredient: Glycerol
Species: Rat
Route of exposure: Oral
Test: LD50
Result: 12600 mg/kg

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Respiratory or skin sensitization : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance: Glycerol

Species: Fish

Test: LC50

Result: 51 - 57 mL/L, 96h static (Oncorhynchus mykiss)

12.2. Persistence and degradability

Ligase

Persistence and degradability	Not established.
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12.3. Bioaccumulative potential

Ligase

Bioaccumulative potential	Not established.
---------------------------	------------------

12.4. Mobility in soil

No data available.

12.5. Other adverse effects

Other information : This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261) : None of the components are listed

Contaminated packing : Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

In accordance with DOT, IMDG, and IATA, No dangerous good in sense of transport regulations. No transport hazard class.

Additional information

Other information : No supplementary information available.

14.6

Special precautions for user : Not applicable

14.7

Transport in bulk according to Annex II of Marpol and the IBC Code : No data available.

SECTION 15: Regulatory information

15.1. US Federal regulations

United States Toxic Substances Control Act:	Glycerol is listed
Clean Air Act:	None of the components are listed
EPCRA Section 302:	None of the components are listed
EPCRA Section 304:	None of the components are listed
EPCRA section 313:	None of the components are listed
CERCLA:	None of the components are listed

15.3. US State regulations

California / Prop. 65:	None of the components are listed
Massachusetts / Right To Know Act:	Glycerol is listed
New Jersey / Right To Know Act:	Glycerol / Substance number: 3319
New York / Right To Know Act:	None of the components are listed
Pennsylvania / Right To Know Act:	Glycerol is listed

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No.

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

The full text of identified uses as mentioned in section 1: None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate

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BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information: In accordance with HCS (29 CFR 1910.1200(g)), a safety data sheet is not required for this product. This safety data sheet has been created on a voluntary basis to distribute relevant information.

The information and recommendations presented in this SDS are based on sources believed to be accurate. seqWell assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, 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 ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : 5x Reaction Buffer
Other means of identification : Part numbers 301471, 301450

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture : Laboratory use. Restricted to professional users.
Uses Advised Against : In vivo.

1.3. Details of the supplier of the safety data sheet

seqWell, Inc.
66 Cherry Hill Dr.
Beverly, 01915 - USA
T 855-737-9355
www.seqwell.com

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Not classified according to HCS (29 CFR 1910.1200)

2.2. Label elements

GHS-US labeling

No labeling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable. This product is a mixture.
Full text of H-phrases: see section 16

3.2. Mixture

Hazardous Ingredients: Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated, CAS: 25322-68-3, %w/w: 25-40%

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures, general : If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
First-aid measures after inhalation : In case of discomfort: bring the person into fresh air.
First-aid measures after skin contact : Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
First-aid measures after eye contact : Rinse gently with lukewarm water. Remove any contact lenses if this is easy to do. Continue rinsing. In case of persistent eye irritation or discomfort: Seek medical help.
First-aid measures after ingestion : Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Bring this Safety Data Sheet.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Not applicable

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire extinguishing water to enter the sewage system and nearby surface waters. If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

- | | | |
|--------------------------------|---|---|
| Firefighting instructions | : | Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice. |
| Protection during firefighting | : | Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- | | | |
|----------------------|---|-------------------------------------|
| Emergency procedures | : | Contaminated areas may be slippery. |
|----------------------|---|-------------------------------------|

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

- | | | |
|-------------------------|---|---|
| Methods for cleaning up | : | Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents. |
|-------------------------|---|---|

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures..

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- | | | |
|-------------------------------|---|--|
| Precautions for safe handling | : | Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. |
|-------------------------------|---|--|

7.2. Conditions for safe storage, including any incompatibilities

- | | | |
|------------------------|---|----------------------------------|
| Storage conditions | : | Keep only in original packaging. |
| Storage temperature | : | -25°C to -15°C |
| Incompatible materials | : | No Specific requirements. |

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)

8.2. Exposure controls

Apply general control to prevent unnecessary exposure

- | | | |
|--------------------------------|---|--|
| General Recommendations | : | When handling chemical products, do not eat, drink or smoke. |
| Exposure Scenarios | : | There are no exposure scenarios implemented for this product. |
| Exposure Limits | : | Occupational exposure limits have not been defined for the substances in this product. |
| Appropriate Technical Measures | : | Apply standard precautions during use of the product. Avoid inhalation of vapours. |

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- | | | |
|--|---|---|
| Hygiene Measures | : | Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. |
| Measures to avoid environmental exposure | : | No specific requirements. |

Individual protection measures, such as personal protective equipment

- | | | |
|-----------------------|---|--|
| Generally | : | Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent). |
| Respiratory Equipment | : | If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. |
| Skin Protection | : | Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent). Appropriate techniques should be used to remove used gloves and contaminated clothing. |
| Hand Protection | : | Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. |
| Eye Protection | : | Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent). |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- | | | |
|------------------------------|---|-------------------|
| Physical state | : | Liquid |
| Color | : | Clear |
| Odor | : | None |
| Odor threshold | : | No data available |
| pH | : | 7.6 |
| Density (g/cm ³) | : | No data available |
| Relative density | : | No data available |
| Kinematic viscosity | : | No data available |
| Particle characteristics | : | No data available |

Phase Changes

- | | | |
|--|---|---------------------------|
| Melting point (°F) | : | No data available |
| Softening point/range (waxes and pastes) (°F): | : | Does not apply to liquids |
| Boiling point (°F) | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | No data available |
| Decomposition temperature (°F) | : | No data available |

Data on fire and explosion hazards

- | | | |
|--------------------------------|---|-------------------|
| Flash point (°F) | : | No data available |
| Flammability (°F) | : | No data available |
| Auto-ignition temperature (°F) | : | No data available |
| Explosion limits (%v/v) | : | No data available |

Solubility

- | | | |
|--------------------------------------|---|-------------------|
| Solubility in water | : | No data available |
| n-octanol/water coefficient (LogKow) | : | No data available |
| Solubility in fat (g/L): | : | No data available |

Other information

- | | | |
|---|---|-------------------|
| Evaporation rate (n-butylacetate = 100) | : | No data available |
| Other physical and chemical parameters | : | No data available |
| Oxidizing properties | : | No data available |

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SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive under recommended handling and storage conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4. Conditions to avoid

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5. Incompatible materials

No specific requirements.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Long term effects	: None Known
Other information	: None Known

SECTION 12: Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

5x Reaction Buffer

Persistence and degradability	Based on available data, the classification criteria are not met.
-------------------------------	---

12.3. Bioaccumulative potential

5x Reaction Buffer

Bioaccumulative potential	Based on available data, the classification criteria are not met.
---------------------------	---

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

Other adverse effects : None known.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)	: None of the components are listed
Contaminated packing	: Packaging containing residues of the product must be disposed of similarly to the product.

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SECTION 14: Transport information

In accordance with DOT, IMDG, and IATA, No dangerous good in sense of transport regulations. No transport hazard class.

Additional information

Other information : No supplementary information available.

14.6

Special precautions for user : Not applicable

14.7

Transport in bulk according to Annex II of Marpol and the IBC Code : No data available.

SECTION 15: Regulatory information

15.1. US Federal regulations

United States Toxic Substances Control Act: Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated is listed

Clean Air Act: None of the components are listed

EPCRA Section 302: None of the components are listed

EPCRA Section 304: None of the components are listed

EPCRA section 313: None of the components are listed

CERCLA: None of the components are listed

15.3. US State regulations

California / Prop. 65: None of the components are listed

Massachusetts / Right To Know Act: None of the components are listed

New Jersey / Right To Know Act: None of the components are listed

New York / Right To Know Act: None of the components are listed

Pennsylvania / Right To Know Act: None of the components are listed

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No.

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

The full text of identified uses as mentioned in section 1: None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

OECD = Organisation for Economic Co-operation and Development

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OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information: In accordance with HCS (29 CFR 1910.1200(g)), a safety data sheet is not required for this product. This safety data sheet has been created on a voluntary basis to distribute relevant information.

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : 2x Amplification Master Mix
Product code : Part Numbers 301473, 301452

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture : Laboratory use. Restricted to professional users.
Uses Advised Against : In vivo.

1.3. Details of the supplier of the safety data sheet

seqWell, Inc.
66 Cherry Hill Dr.
Beverly, 01915 - USA
T 855-737-9355
www.seqwell.com

1.4. Emergency telephone number

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 "First aid measures".

SECTION 2: Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Acute Tox. 3; H301, Toxic if swallowed.
STOT SE 1; H370, Causes damage to organs.

2.2. Label elements

GHS-US labeling

Hazard Pictograms:



Signal Word: Danger
Hazard Statement(s): Toxic if swallowed. (H301)
Causes damage to organs. (H370)
Prevention: Do not breathe vapour/mist. (P260)
Wash hands and exposed skin thoroughly after handling. (P264)
Response: IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310)
IF exposed or concerned: Call a POISON CENTER/doctor (P308+P311)
Specific treatment (see instructions on this label). (P321)
Rinse mouth. (P330)
Disposal: Dispose of contents/container in accordance with local regulation (P501)

2.3. Other hazards

Additional warnings: This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable. This product is a mixture.

3.2. Mixture

Hazardous Ingredients:

Substance	Identifier	%w/w	Classification
Glycerol	CAS: 56-81-5	15-25%	
Tromethamine	CAS: 77-86-1	3-5%	
Tetramethylammonium chloride	CAS: 75-57-0	1-3%	Acute Tox. 2, H300 Acute Tox. 3, H311 Skin Irrit. 2, H315 STOT SE 1, H370 (Central nervous system)

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

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SECTION 4: First aid measures

4.1. Description of first aid measures

- | | |
|---------------------------------------|--|
| First-aid measures, general | : If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink. |
| First-aid measures after inhalation | : Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her. |
| First-aid measures after skin contact | : Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. |
| First-aid measures after eye contact | : If in eyes: Flush eyes with water or saline water (20-30°C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport. |
| First-aid measures after ingestion | : In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance. |
| Burns | : Not Applicable |

4.2. Most important symptoms and effects, both acute and delayed

None known.

4.3. Indication of any immediate medical attention and special treatment needed

If exposed or concerned: Get immediate medical advice/attention. Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Not applicable

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire extinguishing water to enter the sewage system and nearby surface waters. If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

- | | |
|--------------------------------|---|
| Firefighting instructions | : Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- | | |
|----------------------|--|
| Emergency procedures | : Avoid direct contact with spilled substances. Ensure adequate ventilation, especially in confined areas. Contaminated areas may be slippery. |
|----------------------|--|

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

- | | |
|-------------------------|---|
| Methods for cleaning up | : Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents. |
|-------------------------|---|

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures..

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- | | |
|-------------------------------|--|
| Precautions for safe handling | : Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. |
|-------------------------------|--|

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7.2. Conditions for safe storage, including any incompatibilities

Recommended storage material	: Keep only in original packaging.
Storage temperature	: -25°C to -15°C
Incompatible materials	: No specific requirements

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Glycerol
Long term exposure limit (OSHA Table Z-1) (mg/m³): 15 (total dust) / 5 (Respirable fraction)
Long term exposure limit (NIOSH REL) (mg/m³): 10

Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General Recommendations	: When handling chemical products, do not eat, drink or smoke.
Exposure Scenarios	: There are no exposure scenarios implemented for this product.
Exposure Limits	: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
Appropriate Technical Measures	: The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene Measures	: Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse.
Measures to avoid environmental exposure	: Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally	: Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).
Respiratory Equipment	: If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.
Skin Protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent). Appropriate techniques should be used to remove used gloves and contaminated clothing.
Hand Protection	: Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves.
Eye Protection	: Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Clear
Odor	: Mild
Odor threshold	: No data available
pH	: 8.5

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Density (g/cm ³)	: No data available
Relative density	: No data available
Kinematic viscosity	: No data available
Particle characteristics	: No data available
Phase Changes	
Melting point (°F)	: No data available
Softening point/range (waxes and pastes) (°F):	: Does not apply to liquids
Boiling point (°F)	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Decomposition temperature (°F)	: No data available
Data on fire and explosion hazards	
Flash point (°F)	: No data available
Flammability (°F)	: No data available
Auto-ignition temperature (°F)	: No data available
Explosion limits (%v/v)	: Testing not relevant or not possible due to the nature of the product.
Solubility	
Solubility in water	: No data available
n-octanol/water coefficient (LogKow)	: No data available
Solubility in fat (g/L):	: No data available
Other information	
Evaporation rate (n-butylacetate = 100)	: No data available
Other physical and chemical parameters	: No data available
Oxidizing properties	: No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive under recommended handling and storage conditions.

10.2. Chemical stability

Stable under recommended handling and storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4. Conditions to avoid

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5. Incompatible materials

No specific requirements

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1. SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Ingredient: Glycerol Species: Rat Route of exposure: Oral Test: LD50 Result: 12600 mg/kg Toxic if swallowed.
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

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Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Long term effects	: None known
Other information	: None known

SECTION 12: Ecological information

12.1. Toxicity

Product/substance: Glycerol
Species: Fish
Test: LC50
Result: 51 - 57 mL/L, 96h static (*Oncorhynchus mykiss*)

12.2. Persistence and degradability

2x Amplification Master Mix

Persistence and degradability	Based on available data, the classification criteria are not met..
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12.3. Bioaccumulative potential

2x Amplification Master Mix

Bioaccumulative potential	Based on available data, the classification criteria are not met.
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12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

Other adverse effects	: None known.
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SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)	: None of the components are listed
Contaminated packing	: Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

In accordance with DOT, IMDG, and IATA, No dangerous good in sense of transport regulations. No transport hazard class.

Additional information

Other information	: No supplementary information available.
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14.6

Special precautions for user	: Not applicable
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14.7

Transport in bulk according to Annex II of Marpol and the IBC Code	: No data available.
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SECTION 15: Regulatory information

15.1. US Federal regulations

United States Toxic Substances Control Act:	Glycerol is listed Tromethamine is listed Tetramethylammonium chloride is listed
Clean Air Act:	None of the components are listed
EPCRA Section 302:	None of the components are listed
EPCRA Section 304:	None of the components are listed
EPCRA section 313:	None of the components are listed
CERCLA:	None of the components are listed

15.3. US State regulations

California / Prop. 65:	None of the components are listed
Massachusetts / Right To Know Act:	Glycerol is listed
New Jersey / Right To Know Act:	Glycerol / Substance number: 3319
New York / Right To Know Act:	None of the components are listed

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Pennsylvania / Right To Know Act: Glycerol is listed

15.4. Restrictions for application

Restricted to professional users.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No.

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

Other information : Full text of H-phrases as mentioned in section 3
H300, Fatal if swallowed.
H311, Toxic in contact with skin.
H315, Causes skin irritation.
H370, Causes damage to organs. (Central nervous system)

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development
OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information: In accordance with HCS (29 CFR 1910.1200(g)), a safety data sheet is not required for this product. This safety data sheet has been created on a voluntary basis to distribute relevant information.

SDS US (GHS HazCom 2012)

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