SECTION 1. IDENTIFICATION

Product name : 1st Strand Enzyme Mix

Manufacturer or supplier's details

Company : Quantabio, LLC.
100 Cummings Center
Suite 407J
Beverly, MA 01915
USA
Telephone : +1 888 959 5165

Responsible Department :

E-mail addressResponsible/issuing person : compliance@quantabio.com

Emergency telephone : CHEMTREC
USA & Canada 1-800-424-9300

Recommended use of the chemical and restrictions on use
Recommended use : Laboratory chemicals

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a hazardous substance or mixture.

GHS label elements
Not a hazardous substance or mixture.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>56-81-5</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

If inhaled : Move to fresh air.
If symptoms persist, call a physician.
In case of skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

In case of eye contact: Remove contact lenses. Protect unharmed eye. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: If accidentally swallowed obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: No information available.

Notes to physician: No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during firefighting: Exposure to decomposition products may be a hazard to health.

Hazardous combustion products: Carbon oxides

Further information: In the event of fire and/or explosion do not breathe fumes.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

Methods and materials for containment and cleaning up: Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion: Normal measures for preventive fire protection.

Advice on safe handling: For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

Further information on storage stability: No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
</table>

2 / 9
glycerol | 56-81-5 | TWA (mist, respirable fraction) | 5 mg/m³ | OSHA Z-1

TWA (mist, total dust) | 15 mg/m³ | OSHA Z-1

TWA (Mist - total dust) | 10 mg/m³ | OSHA P0

TWA (Mist - respirable fraction) | 5 mg/m³ | OSHA P0

**Remarks**

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

**Eye protection**

Safety glasses

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Footwear protecting against chemicals

**Hygiene measures**

Keep away from food and drink.

When using do not eat, drink or smoke.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**

liquid

**Color**

No data available

**Odor**

No data available

**Odor Threshold**

No data available

**pH**

No data available

**Melting point/range**

No data available

**Boiling point/boiling range**

c. 212 °F / 100 °C

**Flash point**

No data available

**Evaporation rate**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower**

No data available
### SAFETY DATA SHEET

#### 1st Strand Enzyme Mix

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>10/20/2021</td>
<td>-</td>
<td>10/20/2021</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>soluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### SECTION 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Stable under recommended storage conditions. Hazardous decomposition products formed under fire conditions.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>No data available</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No decomposition if stored and applied as directed.</td>
</tr>
</tbody>
</table>

### SECTION 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**: Not classified based on available information.

**Product:**

- **Acute oral toxicity**: Remarks: No data available
- **Acute inhalation toxicity**: Remarks: No data available
- **Acute dermal toxicity**: Remarks: No data available
Components:
glycerol:
Acute oral toxicity : LD50 Oral (Rat): 12,000 mg/kg
Acute dermal toxicity : LD50 Dermal (Rabbit): 10,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.

Product:
Remarks : May cause skin irritation in susceptible persons.

Components:
glycerol:
Species : Rabbit
Exposure time : 24 h
Result : Mild skin irritation

Serious eye damage/eye irritation
Not classified based on available information.

Product:
Remarks : May irritate eyes.

Components:
glycerol:
Species : Rabbit
Result : Mild eye irritation
Exposure time : 24 h

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Product:
Remarks : No data available

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.
NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
Not classified based on available information.

Aspiration toxicity
Not classified based on available information.

Further information

Product:
Remarks : No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:
Toxicity to fish : Remarks: No data available
Toxicity to algae/aquatic plants : Remarks: No data available
Toxicity to microorganisms : Remarks: No data available

Components:
glycerol:
Toxicity to fish : LC0 (Leuciscus idus (Golden orfe)): > 250 mg/l Exposure time: 48 h

Persistence and degradability
No data available

Bioaccumulative potential

Product:
Bioaccumulation : Remarks: No data available

Mobility in soil
No data available

Other adverse effects

Product:
Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information: No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations
UNRTDG
Not regulated as a dangerous good

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

Domestic regulation
49 CFR
Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylenediaminetetraacetic acid</td>
<td>60-00-4</td>
<td>5000</td>
<td>*</td>
</tr>
</tbody>
</table>

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: No SARA Hazards

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489):

- glycerol 56-81-5 >= 30 - < 50 %

Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:
- ethylenediaminetetraacetic acid 60-00-4 >= 0 - < 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:
- ethylenediaminetetraacetic acid 60-00-4 >= 0 - < 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307. This product does not contain any priority pollutants related to the U.S. Clean Water Act.

Maine Chemicals of High Concern
Product does not contain any listed chemicals

California Permissible Exposure Limits for Chemical Contaminants
- glycerol 56-81-5

TSCA list
No substances are subject to a Significant New Use Rule.
No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations
- OSHA P0 : USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
- OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- OSHA P0 / TWA : 8-hour time weighted average
- OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IBC - International Bulk Chemicals Code; ICD - International Classification of Diseases; IUPAC - International Union of Pure and Applied Chemistry; IQVIA - International Quantum Volatility Index Association; LCD - Large Quantity Designations; LIC - Large Quantity Criteria; LOC - Localized Occupational Exposure Limits; LOC - Localized Occupational Exposure Limits; NIOSH - National Institute for Occupational Safety and Health; NTP - National Toxicology Program; PEL - Permissible Exposure Limit; PM - Property multiple; PM - Property multiple; RCRA - Resource Conservation and Recovery Act; RIF - Risk Index Factor; RIF - Risk Index Factor; RSL - Reasonable Suspicion Level; REL - Recommended Exposure Limit; RG - Regional Guideline; RML - Recommended Minimal Limit; RQ - Regulatory Quantitation; RTH - Real Time Hazard; RL - Recommended Limit; RP - Reporting Period; RPBM - Reporting Periodic Base Multiple; RPBM - Reporting Periodic Base Multiple; RSM - Reporting Sensitivity Multiple; TS - Tolerable Sensitivity; TWA - Time Weighted Average; VCL - Vapour Concentration Limit; VOM - Vapour-Over-Surface Mass; WSP - Workplace Standard
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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