

SAFETY DATA SHEET

Frag/AT Enzyme Mix

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: Frag/AT Enzyme Mix
Product no.: Z0006

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

Company and address: **Watchmaker Genomics, Inc.**
5744 Central Ave, Ste 100
CO 80301 Boulder
USA
T: +1 720-543-2174
E-mail: info@watchmakergenomics.com
Revision: 23/04/2024
SDS Version: 1.0

1.4. Emergency telephone number

In urgent situations: Call 112 and request the poison information centre. (24h service)
Giftnotrufzentrale Berlin, Emergency telephone: +49 30 19240 (day and night)
See also section 4 for first aid measures.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP).

2.2. Label elements

Hazard pictogram(s): Not applicable.
Signal word: Not applicable.
Hazard statement(s): Not applicable.
Precautionary statement(s):
General: -
Prevention: -
Response: -
Storage: -

Disposal:

-

Hazardous substances:

None known.

Additional labelling:

Not applicable.

2.3. Other hazards

Additional warnings:

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

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Glycerol	CAS No.: 56-81-5 EC No.: 200-289-5 REACH: 01-2119471987-18-XXXX Index No.:	40-60%		

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

Other information

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information:

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. 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.

Inhalation:

In case of discomfort: bring the person into fresh air.

Skin contact:

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

Eye contact:

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) and continue until irritation stops. Remove

<i>Ingestion:</i>	contact lenses. 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.
<i>Burns:</i>	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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

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. These are:

Carbon oxides (CO / CO₂)**5.3. Advice for firefighters**

Fire fighters should wear appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

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

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

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

Joint storage is permitted for products in storage classes: 2A, 2B, 3, 4.1B, 4.2, 5.1A, 5.1B, 5.2, 6.1A, 6.1B, 6.1C, 6.1D, 8A, 8B, 10, 11, 12, 13

Restrictions apply to joint storage of products in storage classes: 4.1A, 4.3, 5.1C

Joint storage is NOT allowed for products in all other storage classes.

Recommended storage material:

Keep only in original packaging.

Storage class:

Storage class 12 (Non-combustible liquids).

TRGS 510 - Storage of hazardous substances in non-stationary containers.

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 (8 hours) (mg/m³): 200 (Einatembare Fraktion)

Short term exposure limit (15 minutes) (mg/m³): 400 (Einatembare Fraktion)

Category for short-term values: I

Annotations:

DFG = Senate Commission for the examination of Harmful working materials of the DFG (MAK Commission)

Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.

Technical requirements for hazardous substances, workplace exposure limits, TRGS 900 (Jan. 2006)

DNEL

Glycerol

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	220 mg/m ³

PNEC

Glycerol

Route of exposure:	Duration of Exposure:	PNEC:
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Sewage treatment plant	1 g/L
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8.2. Exposure controls

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

<i>General recommendations:</i>	When handling chemical products, do not eat, drink or smoke.
<i>Exposure scenarios:</i>	There are no exposure scenarios implemented for this product.
<i>Exposure limits:</i>	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
<i>Appropriate technical measures:</i>	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.
<i>Hygiene measures:</i>	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.
<i>Measures to avoid environmental exposure:</i>	No specific requirements.

Individual protection measures, such as personal protective equipment

<i>Generally:</i>	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).
<i>Respiratory Equipment:</i>	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.
<i>Skin protection:</i>	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.
<i>Hand protection:</i>	Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves.
<i>Eye protection:</i>	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

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Clear
<i>Odour / Odour threshold:</i>	None
<i>pH:</i>	No data available
<i>Density (g/cm³):</i>	No data available
<i>Relative density:</i>	No data available
<i>Kinematic viscosity:</i>	No data available
<i>Particle characteristics:</i>	No data available

Phase changes

<i>Melting point/Freezing point (°C):</i>	No data available
<i>Softening point/range (waxes and pastes) (°C):</i>	Does not apply to liquids.
<i>Boiling point (°C):</i>	No data available
<i>Vapour pressure:</i>	No data available
<i>Relative vapour density:</i>	No data available
<i>Decomposition temperature (°C):</i>	No data available

Data on fire and explosion hazards

<i>Flash point (°C):</i>	No data available
<i>Flammability (°C):</i>	No data available
<i>Auto-ignition temperature (°C):</i>	No data available
<i>Lower and upper explosion limit (% v/v):</i>	No data available

Solubility

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

9.2. Other information

<i>Evaporation rate (n-butylacetate = 100):</i>	No data available
<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	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 hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Product/substance	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 sensitisation

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

Skin sensitisation

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.

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards**Long term effects**

None known.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

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

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

12.3. 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.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.
 Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code: Not applicable.

Contaminated packing

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

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	Not regulated	-	Transport hazard class: None	None	No	See below for additional information.
IMDG	Not regulated	-	Transport hazard class: None	None	No	See below for additional information.

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
IATA	Not regulated	-	Transport hazard class: None	None	No	See below for additional information.

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

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

Restrictions for application:

Restricted to professional users.

Demands for specific education:

No specific requirements.

SEVESO - Categories / dangerous substances:

Not applicable.

Additional information:

WGK class: WGK 3

Sources:

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.
 Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV).
 Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
 Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

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
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
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)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
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

Not applicable.

The safety data sheet is validated by

Watchmaker Genomics, Inc.

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: DE-en

This product has been classified in accordance with EC No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and EC No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878. The information provided in this SDS is correct, to the best of our knowledge, based on information

available. The information given is designed only as a guidance for safe handling, use, storage, transportation, and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.