

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product name: Human alpha-thrombin
Catalog number: HTHROM-A

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

Identified uses: Laboratory chemicals, for research use only
Uses advised against: Not for clinical or diagnostic use

1.3. Details of the supplier of the safety data sheet

Molecular Innovations, Inc.
46430 Peary Court, Novi, MI 48377, USA
Tel: 248-896-0142
Fax: 248-896-0148

1.4. Emergency telephone number

Emergency number: 248-896-0142

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Not a hazardous substance or mixture.

2.2. GHS label elements, including precautionary statements

Not a hazardous substance or mixture. No labeling applicable.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

Name	CAS No.	EC No.	Concentration	Classification
Thrombin	9002-04-4	232-648-7	<1%	Not classified
Glycerol	56-81-5	200-289-5	50%	Not classified

No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures**4.1. Description of first aid measures****If inhaled**

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

In all cases of doubt, or when symptoms persist, seek medical attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Carbon oxides.

5.3. Advice for firefighters

Use normal individual fire protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid all unnecessary exposure. Avoid breathing vapors, mist or gas. For personal protection see section 8.

6.2. Environmental precautions

No additional information available.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into inert absorbent material. Clean thoroughly.

6.4. Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Name	CAS No.	Value	Control Parameters	Basis
Glycerol	56-81-5	TWA	10.0 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
		TWA	15.0 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	5.0 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

8.2. Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure: Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Color: No data available
Odor: No data available
Odor threshold: No data available
pH: No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Evaporation rate: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density: No data available
Relative density: No data available
Solubility: Water soluble
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

No data available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

LD50 Oral (rat): 12,600 mg/kg

LD50 Dermal (rabbit): >10,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes eye irritation.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

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

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

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

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available.

Specific target organ toxicity-single exposure

No data available.

Specific target organ toxicity repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

RTECS: MA8050000

Prolonged or repeated exposure may cause nausea, headache, vomiting. To the best of our knowledge the product does not present any particular risk under normal conditions of use. The chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence

Safety Data Sheet in accordance with Regulation (EC) No. 1907/2006, as amended.

SECTION 12: Ecological information

12.1. Toxicity

Presents no specific risk for the environment in small amounts.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

Not dangerous goods in accordance with DOT (US) / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1 UN number

Not regulated.

14.2 UN proper shipping name

Not regulated.

14.3 Transport hazard class(es)

Not regulated.

14.4 Packaging group

Not regulated.

14.5 Environmental hazards

No data available.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of Marpol73/78 and the IBC Code

No data available.

SECTION 15: Regulatory information

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

United States Restrictions

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: 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.

SARA 311/312 Hazards: No SARA Hazards.

Massachusetts Right To Know Components: Glycerol, CAS No. 56-81-5.

Pennsylvania Right To Know Components: Glycerol, CAS No. 56-81-5.

New Jersey Right To Know Components: Glycerol, CAS No. 56-81-5.

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

European Union Restrictions

Act No. 350/2011 Coll., to regulate chemical substances and chemical mixtures and to amend some statutes, as amended.

Implemented regulations to Act No. 350/2011 Coll., as amended The Waste Act as amended. Government Decree No. 361/2007 Coll., to regulate the conditions of occupational health and safety, as amended. Regulation of the European Parliament and the Council (EC) No. 1907/2006 (REACH). Regulation of the European Parliament and the Council (EC) No. 1272/2008 (CLP). Commission Regulation (EU) No. 453/2010. Directives 67/548/EEC as amended and 1999/45/EC as amended.

15.2. Chemical safety assessment

Chemical safety assessment has not been carried out.

SECTION 16: Other information

Hazardous Material Information System (HMIS) Rating

Health Hazard: 0

Chronic Health Hazard:

Flammability: 0

Physical Hazard: 0

National Fire Protection Association (NFPA) Rating

Health Hazard: 0

Fire Hazard: 0

Reactivity Hazard: 0

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