Proteinase K

Safety Data Sheet

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : Proteinase K
Product code : E0801

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Molecular biology reagent
Restrictions on use : For research purpose only

1.4. Supplier's details

Fermatix
360 Audubon Rd.
Wakefield, MA 01880
T 1-781-557-5577
customerservice@fermatix.com

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 1019116
Back-up Emergency Number: +1 703-741-5970 (Washington, DC)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Full text of H statements : see section 16

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
Precautionary statements (GHS US) : Avoid breathing mist, spray, vapors.
Wear respiratory protection.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a poison center or doctor.
Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Glycerine	CAS-No.: 56-81-5	54.68	Not classified
Proteinase, Tritirachium album serine	CAS-No.: 39450-01-6	1.72	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.

First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.

Symptoms/effects after eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.

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

Most Important Symptoms/Effects : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : If exposed or concerned: Call a poison center or doctor.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon monoxide (CO). Carbon dioxide (CO2).

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Cool affected containers with flooding quantities of water. Move containers from fire area if it can be done without personal risk. Prevent fire-fighting water from entering environment.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all personal contact including breathing in the mist, spray, vapors. Avoid contact with eyes, skin and clothing. Do not take actions involving personal risks. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Evacuate the danger area. If outdoors, move to an area upwind of the danger area. If possible without taking personal risks, remove ignition sources and ventilate area. Prevent other non-emergency personnel from entering the danger area.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Wear recommended personal protective equipment.
Emergency procedures : Evacuate unnecessary personnel. Do not touch or walk on the spilled product. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment. Do not let the product reach soil, drains, sewers, or surface and ground water.

6.2. Methods and materials for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up	:	Take up liquid spill into absorbent material. Contaminated absorbent material may pose the same hazard as the spilled product. Decontaminate surfaces and equipment with water and detergent. Until a sufficient level of dilution is achieved, the decontamination water may pose the same hazards as the product. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13: "Disposal considerations".

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Wear personal protective equipment. Avoid breathing mist, spray, vapors. Avoid contact with eyes, skin and clothing. Use only outdoors or in a well-ventilated area. Take precautionary measures against static discharge.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	:	Keep container tightly closed. Store in a cool, dry and well-ventilated area away from incompatible substances.
Incompatible materials	:	Strong acids. Strong oxidizing agents. Potassium permanganate. Hydrogen peroxide.
Heat-ignition	:	Keep Away From Heat.
Packaging materials	:	Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Glycerine (56-81-5)

USA - OSHA - Occupational Exposure Limits

Local name	Glycerin (mist)
OSHA PEL TWA	15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station. Use general ventilation, local exhaust ventilation, or process enclosure to keep the airborne concentrations below the permissible exposure limits. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Environmental exposure controls	:	Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Hand protection:
Wear protective gloves

Eye protection:
Wear safety glasses which protect from splashes

Skin and body protection:
Body protection should be chosen depending on activity and possible exposure. Wear suitable protective clothing

Respiratory protection:
Use NIOSH approved respirator if ventilation is inadequate. SCBA for emergency responders. Must be used in accordance with an OSHA compliant respiratory protection program.

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Amorphous.
Color	:	Clear, colorless
Odor	:	No data available
Odor threshold	:	No data available
pH	:	7.4 @ 25 °C / 77 °F
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong acids. Strong oxidizing agents. Potassium permanganate. Hydrogen peroxide.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Carbon monoxide (CO). Carbon dioxide (CO2).

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Glycerine	
LD50 oral rat	12600 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 Inhalation - Rat	5.85 mg/l air
LC50 Inhalation - Rat (Vapors)	> 2.75 mg/l

Skin corrosion/irritation : Not classified
pH: 7.4 @ 25 °C / 77 °F

Glycerine	
Additional information	Not irritating to rabbits on cutaneous application

Serious eye damage/irritation : Not classified
pH: 7.4 @ 25 °C / 77 °F

Glycerine	
Additional information	Not irritating to rabbits on ocular application

Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Glycerine	
Method, LLNA, mouse	(Not sensitive)

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Proteinase, Tritirachium album serine	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/effects after eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.
Most Important Symptoms/Effects : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Glycerine	
LC50 - Fish [1]	54000 mg/l

12.2. Persistence and degradability

Proteinase K	
Persistence and degradability	Not established.

Proteinase, Tritirachium album serine	
Persistence and degradability	Not rapidly degradable

Glycerine	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Glycerine	
Partition coefficient n-octanol/water (Log Pow)	-1.75

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	:	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	:	Disposal must be done according to official regulations.
Additional information	:	Do not re-use empty containers.
Ecological waste information	:	Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. Proper Shipping Name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
	Not regulated	
No supplementary information available		

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

IMDG
Not regulated

IATA
Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Proteinase, Tritirachium album serine	CAS-No. 39450-01-6	1.72%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

Proteinase, Tritirachium album serine (39450-01-6)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

Glycerine (56-81-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Glycerine (56-81-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Glycerine(56-81-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

According to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date : 3/3/2026

Full text of hazard classes and H-statements	
H315	Causes skin irritation
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.