

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**GHS product identifier****Product Name** Proteinase K**Other means of identification****Product Code(s)** 10026300, 80025, 10008500, 10255000, 10288200**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** General Laboratory Use**Uses advised against** No information available**Supplier's details****Supplier Address**HTG Molecular Diagnostics Inc.
3430 E. Global Loop
Tucson, AZ 85706
TEL: (520) 547-2827
FAX: (520) 547-2837**Emergency telephone number****Emergency Telephone** CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US **Number****2. HAZARDS IDENTIFICATION****Classification**

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Respiratory Sensitization	Category 1
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GHS Label elements, including precautionary statements**Emergency Overview****Signal Word** Danger**Hazard Statements**

· May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Appearance** Colorless, clear**Physical State** Liquid.**Odor** None**Precautionary Statements****Prevention**

- Avoid breathing dust/fume/gas/mist/vapors/spray
- In case of inadequate ventilation wear respiratory protection

General Advice

- None

Inhalation

- IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Storage

- None

Disposal

- Dispose of in accordance with local/regional/national regulations.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Glycerol	56-81-5	60-100	*
Proteinase, serine (Tritirachium album)	102925-54-2	3-7	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**Description of necessary first-aid measures****Eye Contact**

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If irritation persists, call a physician.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion	Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

Most important symptoms/effects, acute and delayed

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

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

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical

No information available

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Environmental Precautions

Environmental Precautions Prevent product from entering drains.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Ensure adequate ventilation. Wear personal protective equipment. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glycerol 56-81-5	-	TWA: 15 mg/m ³ mist, total particulate TWA: 5 mg/m ³ mist, respirable fraction (vacated) TWA: 10 mg/m ³ mist, total particulate (vacated) TWA: 5 mg/m ³ mist, respirable fraction	-

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields.
Skin and Body Protection Impervious gloves. Lightweight protective clothing.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Odor None

<u>Property</u>	<u>Values</u>
pH	No data
Melting Point/Range	available
Boiling Point/Boiling Range	No data
Flash Point	available
Evaporation rate	No data
Flammability (solid, gas)	available
Flammability Limits in Air	No data
upper flammability limit	available
lower flammability limit	No data
Vapor Pressure	available
Vapor Density	No data
	available

Date 01-Jul-2016

No data available
 No data available
 No data available
 No data available

Appearance
Odor Threshold

Colorless, clear
 No information available

Remarks/ - Method

None known
 None known
 None known
 None known
 None known
 None known

None known
 None known

Relative Density No data available **Specific Gravity** No data available.
Water Solubility No data available
Solubility in other solvents No data available
Partition coefficient: n-octanol/water No data available
Autoignition Temperature No data available
Decomposition Temperature No data available **Viscosity**
 No data available

None known
 None known
 None known
 None known
 None known
 None known
 None known

Flammable Properties Not flammable

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several ingredients

Inhalation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Eye Contact

May cause eye irritation with susceptible persons.

Skin Contact

May cause skin irritation and/or dermatitis.

Ingestion

May be harmful if swallowed.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	= 12600 mg/kg (Rat)	21900 mg/kg (Rat)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effect ; and also chronic effects from short and long term exposure

Sensitization May cause sensitization by inhalation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Mutagenic Effects No information available.

Carcinogenicity There are no known carcinogenic chemicals in this product.

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration Hazard No information available.

Numerical measures of toxicity

Product Acute Toxicity No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

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Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Glycerol	-	LC50: 51-57 ml/L Oncorhynchus mykiss 96 h static	-	EC50 24 h: > 500 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Glycerol	-1.76

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies **DSL** All components are listed either on the DSL or NDSL.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

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SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Glycerol	X	X	X	-	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazard 0	Flammability 0	Instability 0	Physical and Chemical Hazards -
<u>HMIS</u>	Health Hazard 0	Flammability 0	Physical Hazard 0	Personal Protection X

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General Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet