

## Safety Data Sheet

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)  
Classification according to Regulation (EC) No. 1272/2008 [CLP]

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### Product identifier

<b>Product code</b>	4441400
<b>Product name</b>	Proteinase K
<b>Unique Formula Identifier (UFI)</b>	Not Applicable
<b>Chemical Name</b>	Not Applicable
<b>REACH registration number</b>	No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

#### Relevant identified uses of the substance or mixture and uses advised against

<b>Relevant identified uses</b>	For Research, Forensic or Paternity Use Only. Not for use in diagnostic procedures
<b>Use Description Code</b>	Not available
<b>Uses advised against</b>	Not for consumer use.

#### Details of the supplier of the safety data sheet

##### Manufacturer / Supplier

LIFE TECHNOLOGIES EUROPE BV  
KWARTSWEG 2  
2665 NN BLEISWIJK  
NETHERLANDS  
31-(0)180 392 400  
Email: MSDS@lifetech.com

Life Technologies Limited  
3 Fountain Drive  
Inchinnan Business Park  
Paisley  
PA4 9RF, UK  
+44 (0)141 814 6100

#### Emergency telephone number

**24 hour Emergency Response for Hazardous Materials** Within the USA + Canada: 1-800-424-9300 and

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[or Dangerous Goods] Incident. Spill, Leak, Fire,  
Exposure, or Accident. Call CHEMTREC

1-703-527-3887  
Outside the USA + Canada: 1-703-741-5970

**Country Specific Emergency Number (if available):**

CHEMTREC Ireland (Dublin) +(353)-19014670 (Greeting Language: English and Irish)  
CHEMTREC UK (London) +(44)-870-8200418 (Greeting Language: English)

SECTION 2: Hazards identification

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

**Physical hazards**

Not Hazardous

**Health hazards**

Respiratory sensitiser	Category 1
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**Environmental hazards**

Not Hazardous

**Additional information**

Not Applicable

**Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP]**

**Hazard pictograms**



**Signal Word**

Danger

**Hazard Statements**

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

**EU Specific Hazard Statements**

Not Applicable

**Precautionary Statements**

**Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

### Storage

Not Applicable

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards

This product does not contain any known or suspected endocrine disruptors.

## SECTION 3: Composition/information on ingredients

### Mixtures

Chemical Name	CAS No	EINECS-No.	Weight-%	REACH registration number	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Proteinase, tritirachium album serine	39450-01-6	254-457-8	1-5	-	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334
Glycerin	56-81-5	200-289-5	45-55	01-2119471987-18-X XXX	Not classified

Chemical Name	Specific concentration limit (SCL)	M-Factor	Acute Toxicity Estimate
Proteinase, tritirachium album serine	-	-	-
Glycerin	-	-	-

## SECTION 4: First aid measures

### Description of first aid measures

#### Skin contact

Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash off immediately with plenty of water for at least 15 minutes.

#### Eye contact

Rinse cautiously with water for several minutes. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### Ingestion

Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

#### Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a doctor.

#### Notes to Physician

Treat symptomatically.

### Most important symptoms and effects, both acute and delayed

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

### Indication of any immediate medical attention and special treatment needed

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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## SECTION 5: Firefighting measures

### Extinguishing media

**Suitable extinguishing media**  
**Unsuitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.  
No information available.

**Special hazards arising from the substance or mixture** Not known

**Hazardous Combustion Products**

None under normal use conditions.

**Advice for firefighters**

Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Always wear recommended Personal Protective Equipment  
Use personal protection equipment  
See section 8 for more information

### Environmental precautions

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Always wear recommended Personal Protective Equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use adequate ventilation and/or wear appropriate respirator. See section 8 for more information.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. Store in accordance with local regulations.

### Specific end use(s)

For Research, Forensic or Paternity Use Only. Not for use in diagnostic procedures.

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SECTION 8: Exposure controls/personal protection

**Control parameters**

Chemical Name	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	None	None	None

Chemical Name	Austria	Belgium (TWA)	Czech Republic
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	None	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> TWA 15 mg/m <sup>3</sup> Ceiling

Chemical Name	Denmark (TWA)	Finland OEL (TWA)	France OEL (VME)
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	None	None	10 mg/m <sup>3</sup>

Chemical Name	Germany OEL (TWA)	Ireland (TWA)	Italy OEL (TWA)
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	200 mg/m <sup>3</sup> exposure factor 2	None	None

Chemical Name	Lithuania OEL (TWA)	Netherlands OEL (MAC)	Norway
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	None	None	None

Chemical Name	Poland	Portugal	Spain OEL (TWA)
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup>

Chemical Name	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	United Kingdom
Proteinase, tritirachium album serine 39450-01-6	None	None	None
Glycerin 56-81-5	None	100 mg/m <sup>3</sup> STEL 50 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA

**Derived No Effect Level (DNEL)**

See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Proteinase, tritirachium album serine	None	None	None	None

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39450-01-6 ( 1-5 )				
Glycerin 56-81-5 ( 45-55 )	None	None	None	None

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Proteinase, tritirachium album serine 39450-01-6 ( 1-5 )	None	None	None	None
Glycerin 56-81-5 ( 45-55 )	None	None	DNEL = 56mg/m <sup>3</sup>	None

### Predicted No Effect Concentration (PNEC)

See table for values

Chemical Name	Fresh water sediment	Fresh water	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Proteinase, tritirachium album serine 39450-01-6	None	None	None	None	None
Glycerin 56-81-5	PNEC = 3.3mg/kg sediment dw	None	PNEC = 8.85mg/L	PNEC = 1000mg/L	PNEC = 0.141mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Proteinase, tritirachium album serine 39450-01-6 ( 1-5 )	None	None	None	None	None
Glycerin 56-81-5 ( 45-55 )	PNEC = 0.0885mg/L	PNEC = 0.33mg/kg sediment dw	None	None	None

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

### Exposure controls

#### Personal protection equipment

#### Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

#### Hand protection

Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

#### Eye protection

Tight sealing safety goggles.

#### Skin and Body Protection

Wear suitable protective clothing.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product.

#### Environmental exposure controls

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Physical state	liquid	
Colour	No data	
Odour	No data	
Molecular Weight	No data	
Melting point / melting range	°C No data	°F No data
Boiling point / boiling range	°C No data	°F No data
Flammability (solid, gas)	No data	
Lower explosion limit	No data	
Upper explosion limit	No data	
Flash point	°C No data	°F No data
Autoignition Temperature	°C No data	°F No data
Decomposition temperature	°C No data	°F No data
Evaporation rate	No data	
Viscosity	No data	
Solubility	No data	
Partition coefficient: n-octanol/water	No data	
Vapour Pressure	No data	
Specific gravity	No data	
Relative density	No data	
Vapour density	No data	
Explosive properties	No data	
Oxidising properties	No data	
Particle characteristics	No data	

### Other information

#### Information with regards to physical hazard classes

No information available

#### Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	None under normal processing.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	None under normal use conditions.

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SECTION 11: Toxicological information

**Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Product Information**                      No acute toxicity information is available for this product

**Acute Toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Proteinase, tritirachium album serine	No data available	No data available	No data available
Glycerin	= 12600 mg/kg (Rat)	> 10 g/kg(Rabbit)	>570mg/m <sup>3</sup> (Rat)

**Principal Routes of Exposure**

**Skin corrosion/irritation**              Data are conclusive but insufficient for classification

**Serious eye damage/irritation** Data are conclusive but insufficient for classification

**Respiratory or skin sensitisation**              May cause sensitisation by inhalation

**Specific target organ toxicity (STOT) – single exposure** Data are conclusive but insufficient for classification

**Specific target organ toxicity (STOT) – repeated exposure** Data are conclusive but insufficient for classification

**Carcinogenicity**                              Data are conclusive but insufficient for classification

**Germ cell mutagenicity**                      Data are conclusive but insufficient for classification

**Reproductive Toxicity**                      Data are conclusive but insufficient for classification

**Aspiration Hazard**                              Data are conclusive but insufficient for classification

**Information on other hazards**

**Endocrine disrupting properties**              This product does not contain any known or suspected endocrine disruptors.



## SECTION 12: Ecological information

### Toxicity

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

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Proteinase, tritirachium album serine	No data available	No data available	No data available	No data available	No data available
Glycerin	No data available	No data available	No data available	No data available	logPow-1.75

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

**Mobility in soil** No information available.

**Results of PBT and vPvB assessment** No information available.

### Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

### Other adverse effects

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone depletion potential (ODP)** This product does not contain any known or suspected substance

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Not classified as dangerous in the meaning of transport regulations

<b>UN number or ID number</b>	Not Applicable
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable
<b>Packing group</b>	Not Applicable

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**Environmental hazards**

Not Applicable

**Special precautions for user**

Not Applicable

**Maritime transport in bulk according to IMO instruments**

Not Applicable.

## SECTION 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****Substances of Very High Concern**

None

**Substance subject to authorisation per REACH Annex XIV**

None

**Restricted substances under EC 1907/2006, Annex XVII**

Chemical Name	Weight-%	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Proteinase, tritirachium album serine	1-5	Use restricted. See item 75.

**Regulation (EC) No 649/2012 (Rotterdam Convention - export/import of dangerous chemicals)**

None

**Regulation (EU) No 2019/1021 (Stockholm Convention – persistent organic pollutants)**

None

**EU - Substances Depleting the Ozone layer (1005/2009)**

None

**German Water hazard classes (Wassergefährdungsklassen)**

Chemical Name	Weight-%	Water hazard class (WGK)
Glycerin	45-55	hazard class 1 - slightly hazardous to water

**Other International Inventories**

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified Chemical)	ENCS (Japan)	PICCS (Philippines)

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		Substances)		
Proteinase, tritirachium album serine	Listed	-	-	-
Glycerin	Listed	-	Listed	Listed

Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
Proteinase, tritirachium album serine	-	-	-	-
Glycerin	Listed	Listed	Listed	-

### Chemical safety assessment

No Chemical safety assessment has been carried out.

## SECTION 16: Other information

**Reason for revision** Update according to Commission Regulation EU No. 2020/878  
**Revision number** 4  
**Revision date** 11-Apr-2024

### References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Respiratory sensitiser                      Category 1                      Calculation method

### Abbreviations and acronyms

**TWA** - Time-Weighted Average  
**OELs** - Occupational Exposure Limits  
**STEL** - Short Term Exposure Limit  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**CEPA** - Canadian Environmental Protection Act  
**EPA** - Environmental Protection Agency  
**OSHA** - Occupational Safety and Health Administration of the US Department of Labour  
**IATA** - International Air Transport Association  
**DOT** - Department of Transportation  
**IMDG** - International Maritime Dangerous Goods  
**ACGIH** - American Conference of Governmental Industrial Hygienists  
**NIOSH** - National Institute for Occupational Safety and Health  
**AIHA** - American Industrial Hygiene Association  
**HMIS** - Department of Defense Hazardous Materials Information System  
**NTP** - National Toxicology Program  
**IARC** - International Agency for Research on Cancer

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006.

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

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