

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

### Identification of the substance or mixture

**Product code** K0721COMPONENTA  
**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

Thermo Fisher Scientific Baltics UAB  
 V.Graiciuno 8  
 LT-02241 Vilnius  
 Lithuania  
 Tel.: +370 5 2602131  
 Fax.: +370 5 2602142

#### Emergency telephone number for China

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident), call  
 CHEMTREC Domestic North America: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

### Hazard pictograms



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

"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"

**End of Safety Data Sheet**

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

### Identification of the substance or mixture

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**Product name** Proteinase K

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 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

### Hazard pictograms



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified



**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

"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"

**End of Safety Data Sheet**

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

### Identification of the substance or mixture

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**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

### Hazard pictograms



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal



use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
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<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

"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"

**End of Safety Data Sheet**

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

### Identification of the substance or mixture

**Product code** K0721COMPONENTA  
**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

Thermo Fisher Scientific Baltics UAB  
 V.Graiciuno 8  
 LT-02241 Vilnius  
 Lithuania  
 Tel.: +370 5 2602131  
 Fax.: +370 5 2602142

#### Emergency telephone number for China

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident), call  
 CHEMTREC Domestic North America: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

**Hazard pictograms**



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**



## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

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**End of Safety Data Sheet**

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

### Identification of the substance or mixture

**Product code** K0721COMPONENTA  
**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

Thermo Fisher Scientific Baltics UAB  
 V.Graiciuno 8  
 LT-02241 Vilnius  
 Lithuania  
 Tel.: +370 5 2602131  
 Fax.: +370 5 2602142

#### Emergency telephone number for China

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident), call  
 CHEMTREC Domestic North America: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

### Hazard pictograms



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	



## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

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**End of Safety Data Sheet**

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

### Identification of the substance or mixture

**Product code** K0721COMPONENTA  
**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

Thermo Fisher Scientific Baltics UAB  
 V.Graiciuno 8  
 LT-02241 Vilnius  
 Lithuania  
 Tel.: +370 5 2602131  
 Fax.: +370 5 2602142

#### Emergency telephone number for China

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident), call  
 CHEMTREC Domestic North America: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

**Hazard pictograms**



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Boiling point / boiling range</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Flash point</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Autoignition Temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
<b>Flammability (solid, gas)</b>	No data available	
<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
<b>Solubility</b>	No data available	
<b>Partition coefficient: n-octanol/water</b>	No data available	
<b>Explosive properties</b>	Mixture has not been tested	
<b>Other information</b>	No data available	

## SECTION 10: Stability and reactivity

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

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
Proteinase K	No data available	No data available	No data available
Glycerol	= 12600 mg/kg Oral	No data available	>570mg/m <sup>3</sup> (Rat)

### Principal Routes of Exposure

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification
<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification



## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
<b>Proteinase K</b>	No data available	No data available	No data available	No data available	No data available
<b>Glycerol</b>	No data available	Daphnia magna EC50>500 mg/L (24 h)	No data available	No data available	logPow-1.76

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other adverse effects** No information available.

## 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 accordance with 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.

**UN number** Not Applicable

**UN proper shipping name** Not Applicable

**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
Proteinase K 39450-01-6 ( 1 - 5 )	-
Glycerol 56-81-5 ( 40-70 )	Listed

### US Federal Regulations

#### **SARA 313**

This product is not regulated by SARA.

#### **Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs.

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **WHMIS Hazard Class**

D2A - Very toxic materials



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

## SECTION 16: Other information

<b>Reason for revision</b>	SDS sections updated.
<b>Revision number</b>	5
<b>Revision date</b>	23-Mar-2017

Use as laboratory reagent. Scientific research and development.

#### **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>

"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"

**End of Safety Data Sheet**

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

### Identification of the substance or mixture

**Product code** K0721COMPONENTA  
**Product name** Proteinase K

### Company/undertaking identification

#### Manufacturer/Supplier

Thermo Fisher Scientific Baltics UAB  
 V.Graiciuno 8  
 LT-02241 Vilnius  
 Lithuania  
 Tel.: +370 5 2602131  
 Fax.: +370 5 2602142

#### Emergency telephone number for China

For Chemical Emergency (Spill, Leak, Fire, Exposure or Accident), call  
 CHEMTREC Domestic North America: 1-800-424-9300 (24 hours)  
 CHEMTREC International: 1-703-527-3887 (collect calls accepted)

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

**Use as laboratory reagent. Scientific research and development.**

## SECTION 2: Hazards identification

### GHS - Classification

**Signal Word**  
 DANGER

### Hazard pictograms



#### Health hazards

Respiratory sensitization

Category 1

#### Physical hazards

Not classified

**Environmental hazards**

Not classified

**Hazard Statements**

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

**Precautionary Statements****Prevention**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P284 - In case of inadequate ventilation wear respiratory protection

**Response**

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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**

Not Applicable

**HMIS**

Health	4
Flammability	0
Reactivity	0

**SECTION 3: Composition/information on ingredients**

Component	CAS-No	EINECS-No	Weight %
Proteinase K 39450-01-6 ( 1 - 5 )	39450-01-6	254-457-8	1 - 5
Glycerol 56-81-5 ( 40-70 )	56-81-5	200-289-5	40-70

We recommend handling all chemicals with caution.

**SECTION 4: First aid measures****Skin contact**

Rinse cautiously with water for several minutes. Immediate medical attention is not required.

**Eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**Ingestion**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**Inhalation**

Not expected to be an inhalation hazard under anticipated conditions of normal

use of this material. Consult a physician if necessary.

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

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

**Notes to Physician**

Treat symptomatically.

**SECTION 5: Firefighting measures**

**Extinguishing media**

**Suitable extinguishing media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical.

**Unsuitable extinguishing media**

No information available.

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

**Advice for fire-fighters**

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 detail.

**Environmental precautions**

No special environmental precautions required.

**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**

Use personal protective equipment as required. .

**Conditions for safe storage, including any incompatibilities**

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

**Specific end use(s)**

For research use only.

**SECTION 8: Exposure controls/personal protection**

**Control parameters**

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Proteinase K	None	None	None	None
Glycerol	15 mg/m <sup>3</sup> 5 mg/m <sup>3</sup>	None	None	None

**Engineering measures**

Ensure adequate ventilation, especially in confined areas

**Exposure controls**

## Personal Protective Equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
<b>Hand protection</b>	Wear suitable gloves Glove material: Compatible chemical-resistant gloves.
<b>Eye protection</b>	Tight sealing safety goggles
<b>Skin and Body Protection</b>	Wear suitable protective clothing
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice
<b>Environmental exposure controls</b>	
No special environmental precautions required.	

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless, liquid	
<b>Odor</b>	odorless	
<b>Melting point / melting range</b>	°C Mixture has not been tested	°F Mixture has not been tested
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<b>Decomposition temperature</b>	°C Mixture has not been tested	°F Mixture has not been tested
<b>Evaporation rate</b>	No data available	
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<b>Upper explosion limit</b>	Mixture has not been tested	
<b>Lower explosion limit</b>	Mixture has not been tested	
<b>Vapor Pressure</b>	Mixture has not been tested	
<b>Relative density</b>	Mixture has not been tested	
<b>Specific gravity</b>	No data available	
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## SECTION 10: Stability and reactivity

<b>Reactivity</b>	None known.
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### Information on toxicological effects

Chemical Name	LD50 (oral, rat/mouse)	LD50 (dermal, rat/rabbit)	LC50 (inhalation, rat/mouse)
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<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## SECTION 12: Ecological information

### Toxicity

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
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**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

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**Transport hazard class(es)** Not Applicable

**Packing group** Not Applicable

**Environmental hazards** Not Applicable

**Special precautions for user** Not Applicable

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## SECTION 15: Regulatory information

Component	US TSCA
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## SECTION 16: Other information

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Use as laboratory reagent. Scientific research and development.

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**End of Safety Data Sheet**