

# Material safety data sheet

according to 1907/2006/EG, Article 31



# GENAXXON

b i o s c i e n c e

Product number : M3036

Product name :

Proteinase K

## 1. Identification of the substance/preparation and of the company

### 1.1. Product identifier

**Product Name: Proteinase K**

**Catalogue number:** M3036

**CAS number:** 39450-01-6

**EC number:** 254-457-8

**Index number:** 647-014-00-9

**REACH Registration Number:** A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

No further relevant information available.

**Application of the substance/the preparation**

Laboratory chemical

Biochemistry

Molecular biology

Chemical for cell culture applications

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

**Manufacturer /Supplier:**

Genaxxon bioscience GmbH, Söflinger Str. 70, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123, info@genaxxon.com

**Further information available from:** General Management

**Emergency telephone number:**

Tel.: +49 (0)731 3608 123 (während der normalen Geschäftszeiten / Inside normal business hours)

**NOTE:** If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

**Product Use:**

This product is for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

## 2. Hazardous identification

### 2.1. Classification of the substance/preparation/mixture

**Classification according to Regulation (EC) No 1272/2008**

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

STOT SE 3 H335 May cause respiratory irritation

### 2.2. Label elements

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

The product is classified and labeled according to the CLP regulation.

**Hazard pictograms**



GHS07 GHS08

Signal word: **Danger**

**Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H335 May cause respiratory irritation.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

### 2.3. Other hazards

**Result of PBT and vPvB assessment**

**PBT:** not applicable

**vPvB:** not applicable

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## 3. Composition/information on ingredients

### 3.1. Chemical characterisation: Substance

CAS-No.: Description  
39450-01-6 Proteinase, Tritirachium album serine  
Identification number(s)  
EC-number: 254-457-8  
Index number: 647-014-00-9

## 4. First-aid measures

### 4.1. Description of first aid measures

#### General information:

Immediately remove any clothing soiled by the product.

#### After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

#### After skin contact:

Wash off with plenty of water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

#### After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

#### After swallowing:

Rinse mouth. Do not induce vomiting; call for medical help immediately.

### 4.2. Most important symptoms and effects, both acute and delayed:

Irritation to eyes, skin and mucous membrane

Allergic reactions

Coughing (

Breathing difficulty.

### 4.3. Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing agents:

Water Spray. Carbon Dioxide. Dry chemical powder, or appropriate foam. Fight larger fires with water spray or alcohol resistant foam.

### 5.2. Special hazards arising from the substance or mixture:

Formation of toxic gases is possible during heating or in case of fire.

In case of a fire, the following can be released:

Carbon oxides (CO, CO<sub>2</sub>)

Nitrogen oxides (NO<sub>x</sub>),

Sulphur oxides (SO<sub>x</sub>)

### 5.3 Advice for fire fighters:

#### Protective equipment:

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

#### Additional information:

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Contain escaping vapours with water.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Do not inhale dust.

Avoid substance contact.

Ensure adequate ventilation.

Use respiratory protective device against the effects of fumes/dust/aerosol.

### 6.2. Environmental precautions:

Do not allow product to enter sewage system, surface or ground water.

Discharge into the environment must be avoided.

### 6.3. Methods and materials for containment and cleaning up:

Pick up mechanically.

Avoid generation of dust.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean up affected area.

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## 6.4. Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7. Handling and storage

### 7.1. Precautions for safe handling:

Provide suction extractors if dust is formed.

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

**Information about fire – and explosion protection:** Keep respiratory protective device available.

### 7.2. Conditions for safe storage, including any incompatibilities

**Requirements to be met by storerooms and receptacles:** Keep receptacles tightly sealed.

Store only in the original receptacle.

**Information about storage in one common storage facility:** No special measures required.

**Further information about storage conditions:**

Keep container sealed.

**Recommended storage temperature:** -20°C

**Storage class:** 13

**7.3. Specific end use(s):** No further relevant information available.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:** The list valid during the making were used as basis.

**Additional information about design of technical facilities:** No further data; see item 7.

### 8.2. Exposure controls:

**Personal protective equipment:**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Store protective clothing separately.

Vacuum clean contaminated clothing. Do not blow or brush off contamination.

Immediately remove all soiled and contaminated clothing.

**Respiratory protection:**

Required when dusts are generated.

Filter: ABEK (EN 149).

**Protection of hands:**



Protective gloves (EN 374)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies

from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**For the permanent contact gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for permeation: Level:  $>480$  min.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for the permeation: Level  $\geq 480$  min.

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**Eye/face protection:** Safety glasses



Safety glasses (EN 166)

## Body protection:

Use protective suit.

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### General Information

##### Appearance

**Form:** Powder  
**Colour:** White  
**Odour:** Odourless

**pH value at 20°C:** Not applicable

##### Change in conditions

**Melting point/Melting range:** Undetermined  
**Boiling point/Boiling range:** Undetermined

**Flash point:** Not applicable

**Flammability (solid, gaseous):** Product is not flammable

**Decomposition temperature:** Not determined

**Self-ignition:** Product is not self-igniting

**Danger of explosion:** Product does not present an explosion hazard

##### Explosion limits:

**Lower:** Not determined  
**Upper:** Not determined

**Vapour pressure:** Not applicable

**Density (20°C):** Not determined

**Bulk density at 20°C:** Not determined

**Solubility in / Miscibility with  
(water, 20°C):**

**Organic solvents:** No data available

**Partition coefficient (n-octanol/water):** Not determined

##### Viscosity:

**Dynamic:** Not applicable  
**Kinematic:** Not applicable

##### Solvent content:

**Organic solvents:** 0.0%  
**VOC (EC)** 0.00%

### 9.2 Other information

#### Appearance:

**Form:** Liquid

#### Important information on protection of health and environment, and on safety.

**Explosive properties:** Product does not present an explosion hazard.

#### Change in condition

**Evaporation rate:** Not applicable.

#### Information with regard to physical hazard classes

**Explosives:** Void ·

**Flammable gases:** Void ·

**Aerosols:** Void ·

**Oxidising gases:** Void ·

**Gases under pressure:** Void ·

**Flammable liquids:** Void ·

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Flammable solids: Void ·  
Self-reactive substances and mixtures: Void ·  
Pyrophoric liquids: Void ·  
Pyrophoric solids: Void ·  
Self-heating substances and mixtures: Void ·  
Substances and mixtures, which emit flammable gases in contact with water: Void ·  
Oxidising liquids: Void ·  
Oxidising solids: Void ·  
Organic peroxides: Void ·  
Corrosive to metals: Void ·  
Desensitised explosives: Void

## 10. Stability and reactivity

10.1. Reactivity: No dangerous reactions known.

10.2. Chemical stability:

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

10.3. Possibility of hazardous reactions: No dangerous reactions known.

10.4. Conditions to avoid: No further relevant information available.

10.5. Incompatible materials: strong oxidants.

10.6. Hazardous decomposition products: In the event of fire: See chapter 5 of this data sheet.

## 11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity:

### LD50/LC50 values relevant for classification

Quantitative data on the toxicological effect of this product are not available.

Oral	LD50	---
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Primary irritant effect

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/irritation: Causes serious eye irritation.

After inhalation: Irritant to skin and mucous membranes.

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

Germ cell mutagenicity: Based on available data, the classification criteria are not met. ·

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met. ·

STOT-single exposure: May cause respiratory irritation. ·

STOT-repeated exposure: Based on available data, the classification criteria are not met. ·

Aspiration hazard: Based on available data, the classification criteria are not met.

11.2. Information on other hazards:

Endocrine disrupting properties: Substance is not listed.

When used and handled according to specifications the product does not have any harmful effects to our experience and the information provided to us.

## 12. Ecological Information

12.1. Toxicity

Aquatic toxicity: No further relevant information available

12.2. Persistence and degradability: No further relevant information available

12.3. Bioaccumulative potential: No further relevant information available

12.4. Mobility in soil: No further relevant information available

12.5. Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.6 Endocrine disrupting properties: The product does not contain substances with endocrine disrupting properties.

12.7. Other adverse effects: No further relevant information available.

Additional ecological information:

General notes: Do not allow product to reach ground water, water course or sewage system. Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

## 13. Disposal considerations

13.1. Waste treatment methods

Recommendation:

Chemicals must be disposed of in compliance with the respective national regulations. Must not be disposed together with household garbage.

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Do not allow product to reach sewage system. Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

## Uncleaned packaging:

**Recommendation:** Disposal must be made according to official regulations. Packagings that may not be cleansed are to be disposed of in the same manner as the product.

**Recommended cleaning agents:** Water, if necessary, together with cleansing agents.

## 14. Transport information

### 14.1. UN-Number

ADR, ADN, IMDG, IATA

Void

### 14.2. UN proper shipping name

ADR, IMDG, IATA

Void

### 14.3. Transport hazard class(es)

ADR, IMDG, IATA

Class

Void

### 14.4. Packaging group

ADR, IMDG, IATA

Void

### 14.5. Environmental hazards:

Marine pollutant

Not applicable.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

Void

## 15. Regulatory information

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

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I:** Substance is not listed.

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II:**

Substance is not listed.

#### REGULATION (EU) 2019/1148

**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3)):**

Substance is not listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS:** Substance is not listed.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16. Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Genaxxon bioscience GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product.

### Disclaimer

This product is for R&D use only. Not for drug, household or other uses.

Abbreviations and Acronyms:

ACAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EINECS: European Inventory of Existing Commercial Chemical Substances

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

GHS: Globally Harmonized System of Classification and labeling of Chemicals

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

IMDG: International Maritime code for Dangerous Goods

LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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