

**PROTEINASE K - SAFETY DATA SHEET**

Prepared for supply in Great Britain under UK REACH and GB CLP. Structured in accordance with the applicable 16-section safety data sheet format.

**SECTION 1****Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

| Item         | Information                        |
|--------------|------------------------------------|
| Product name | Proteinase K                       |
| Product type | Liquid enzyme preparation; mixture |

**1.2 Relevant identified uses and uses advised against**

Industrial technological aid/biocatalyst. Identified uses include industrial use and formulation, mixing or repackaging. Consumer or professional use should only take place where supported by a product-specific exposure and risk assessment. Do not use for medical, diagnostic or therapeutic purposes.

**1.3 Details of the supplier of the safety data sheet**

Scientific and Technical Limited  
John Eccles House, The Oxford Science Park, Oxford OX4 4GP, United Kingdom  
Telephone: +44 1223 626543  
Email: sales@scientificandtechnical.com  
Website: www.scientificandtechnical.com

**1.4 Emergency telephone number**

Supplier: +44 1223 626543 (English; normal UK business hours). For a life-threatening emergency in the UK call 999. For urgent medical advice call NHS 111.

**SECTION 2****Hazards identification****2.1 Classification of the substance or mixture**

- Respiratory sensitisation, Category 1 - H334
- Serious eye damage/eye irritation, Category 2 - H319
- Skin corrosion/irritation, Category 2 - H315

**2.2 Label elements****DANGER**

Hazard-determining component: Enzyme protein

**Hazard statements**

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

H319 - Causes serious eye irritation.

H315 - Causes skin irritation.

**Precautionary statements**

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 - Wash hands thoroughly after handling.

P280 - Wear protective gloves/eye protection/face protection.

P284 - [In case of inadequate ventilation] wear respiratory protection.

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 CENTRE/doctor.

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

P337+P313 - If eye irritation persists: Get medical advice/attention.

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

P332+P313 - If skin irritation occurs: Get medical advice/attention.

P501 - Dispose of contents/container in accordance with local, regional and national regulations.

**2.3 Other hazards**

Available formulation information indicates that the mixture does not meet the PBT or vPvB criteria and contains no identified component with endocrine-disrupting properties. Spraying, vigorous agitation or handling dried residues may generate enzyme-containing aerosols or dust.

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

3.2 Mixtures - Liquid preparation. Declared enzyme protein content: 16-22%.

| Component                     | Concentration | Identifiers                                              | Classification      |
|-------------------------------|---------------|----------------------------------------------------------|---------------------|
| Proteinase K (enzyme protein) | 16-22%        | CAS 39450-01-6<br>EC Not supplied<br>Enzyme EC 3.4.21.64 | Resp. Sens. 1, H334 |

Concentrations and component identities are reported from the available formulation information. Where a total enzyme-protein range is stated for a blend, individual enzyme proportions are not disclosed. Full hazard-statement wording is provided in Section 16.

**SECTION 4****First-aid measures****4.1 Description of first-aid measures**

General: Remove contaminated clothing. Seek medical advice if symptoms persist or if there is any concern.

Inhalation: Move the person to fresh air and keep comfortable for breathing. If breathing is difficult or respiratory sensitisation symptoms occur, contact a doctor or poison centre immediately.

Skin contact: Wash with plenty of water and soap. Wash contaminated clothing before reuse. Seek medical advice if irritation develops.

Eye contact: Rinse cautiously with clean water for at least 15 minutes, holding the eyelids open. Remove contact lenses if present and easy to do. Continue rinsing and obtain medical attention if irritation persists.

Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical advice if symptoms occur.

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

Serious eye irritation; allergic or asthma-like respiratory symptoms in sensitised individuals. Skin irritation.

**4.3 Indication of immediate medical attention and special treatment**

Treat symptomatically. Consider occupational enzyme sensitisation if respiratory symptoms are present.

**SECTION 5****Firefighting measures**

5.1 Extinguishing media: Use water spray, alcohol-resistant foam, dry powder or carbon dioxide as appropriate for the surrounding fire.

5.2 Special hazards: The product is an aqueous preparation and is not expected to sustain combustion. Heating or fire may produce irritating decomposition products. Avoid inhaling enzyme-containing smoke, aerosols or dust.

5.3 Advice for firefighters: Wear self-contained breathing apparatus and full protective clothing. Contain contaminated firefighting water and dispose of it in accordance with local requirements.

**PROTEINASE K - SAFETY DATA SHEET****SECTION 6****Accidental release measures**

6.1 Personal precautions: Ensure adequate ventilation. Avoid inhalation of mist, aerosol or dust. Wear personal protective equipment described in Section 8 and keep unprotected persons away.

6.2 Environmental precautions: Prevent further leakage. Do not allow uncontrolled entry into drains, surface water or soil. Notify the relevant authority if a significant release cannot be contained.

6.3 Methods and material for containment and cleaning: Contain the liquid with inert absorbent material and collect it mechanically. Avoid splashing and high-pressure cleaning. Avoid raising dried residues. Wash the affected surface with water after recovery where local discharge controls permit.

6.4 Reference to other sections: See Section 8 for personal protection and Section 13 for disposal.

**SECTION 7****Handling and storage**

7.1 Precautions for safe handling: Avoid direct contact and inhalation. Do not spray. Avoid splashing and aerosol formation. Use only with adequate ventilation. Do not eat, drink or smoke while handling. Wash hands after use.

7.2 Conditions for safe storage: Keep the original container tightly closed, upright and in a cool, well-ventilated place at 5-25 °C. Protect from heat, direct sunlight, contamination and ignition sources.

7.3 Specific end uses: Industrial use as a biocatalyst/technological aid. No exposure scenario was supplied.

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

8.1 Control parameters: No product-specific workplace exposure limit is stated in the source information. Exposure to airborne enzyme protein should be prevented or reduced to the lowest level reasonably practicable under COSHH.

**8.2 Exposure controls**

| Control                | Recommended measure                                                                                                                                                                                                                  |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering controls   | Use closed handling or effective local exhaust where mist or aerosol may be generated. If exposure cannot be adequately controlled, use suitable respiratory protection with a P3 particulate filter selected by a competent person. |
| Eye/face protection    | Tightly fitting safety goggles. Add a face shield where splashing is possible.                                                                                                                                                       |
| Hand protection        | Chemical-resistant protective gloves. Select material and breakthrough time for the complete formulation and task.                                                                                                                   |
| Body protection        | Suitable protective work clothing.                                                                                                                                                                                                   |
| Hygiene measures       | Wash hands after handling and before breaks. Remove and wash contaminated clothing.                                                                                                                                                  |
| Environmental controls | Prevent uncontrolled release and route wastewater to suitable treatment.                                                                                                                                                             |

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## SECTION 9

## Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

| Property                              | Value/information              |
|---------------------------------------|--------------------------------|
| Physical state                        | Liquid                         |
| Colour                                | Brown                          |
| Odour                                 | Slight fermentation odour      |
| Melting/freezing point                | Not determined                 |
| Boiling point/range                   | Not determined                 |
| Flammability                          | Not classified as flammable    |
| Lower/upper explosion limit           | Not applicable/not determined  |
| Flash point                           | >100 °C (PMCC; reported value) |
| Auto-ignition temperature             | Not determined                 |
| Decomposition temperature             | Not determined                 |
| pH                                    | 5.5-6.5                        |
| Kinematic viscosity                   | No data available              |
| Solubility                            | Soluble/miscible in water      |
| Partition coefficient n-octanol/water | No data available              |
| Vapour pressure                       | Not determined                 |
| Density                               | 1.0-1.1 kg/L                   |
| Relative vapour density               | Not determined                 |
| Particle characteristics              | Not applicable (liquid)        |

9.2 Other information: Evaporation rate, oxidising properties and other physical hazard data have not been determined for the finished mixture.

## SECTION 10

## Stability and reactivity

| Subsection                            | Information                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------|
| 10.1 Reactivity                       | No hazardous reactivity is expected under normal conditions of use.                                 |
| 10.2 Chemical stability               | Stable under the recommended handling and storage conditions.                                       |
| 10.3 Hazardous reactions              | Hazardous polymerisation is not expected.                                                           |
| 10.4 Conditions to avoid              | Aerosol or dust formation, extreme temperatures, ignition sources and contamination.                |
| 10.5 Incompatible materials           | No specific incompatibilities were supplied; avoid strong oxidising agents as a precaution.         |
| 10.6 Hazardous decomposition products | None expected during correct storage. Irritating decomposition products may be generated in a fire. |

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## SECTION 11

## Toxicological information

## 11.1 Information on hazard classes

| Hazard class                   | Assessment based on available information                                                                              |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Acute toxicity                 | No adequate test data for the finished mixture. Not classified as acutely toxic on the supplied component information. |
| Skin corrosion/irritation      | Classified as Skin Irrit. 2; H315.                                                                                     |
| Serious eye damage/irritation  | Classified as Eye Irrit. 2; H319.                                                                                      |
| Respiratory/skin sensitisation | Classified as Resp. Sens. 1; H334. No adequate data for skin sensitisation.                                            |
| Germ cell mutagenicity         | No evidence of classification in the supplied information; no finished-mixture data available.                         |
| Carcinogenicity                | No component identified in the supplied formulation information as a classified carcinogen.                            |
| Reproductive toxicity          | No component identified in the supplied formulation information as a classified reproductive toxicant.                 |
| STOT - single exposure         | Not classified on the available information.                                                                           |
| STOT - repeated exposure       | No data available; not classified.                                                                                     |
| Aspiration hazard              | Not classified on the available information.                                                                           |

Likely routes and symptoms: Inhalation of enzyme-containing mist, aerosol or dust may cause allergic or asthma-like symptoms in sensitised persons. Eye contact causes serious irritation. Skin contact may cause irritation.

11.2 Other hazards: No component is identified in the supplied formulation information as having endocrine-disrupting properties. No additional toxicological effects are known from the available information.

## SECTION 12

## Ecological information

| Subsection                           | Information                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 12.1 Toxicity                        | No finished-product ecotoxicity data available. Prevent release to surface water, drains and soil.                |
| 12.2 Persistence and degradability   | Enzyme proteins are generally biodegradable; no finished-product test data were supplied.                         |
| 12.3 Bioaccumulative potential       | Bioaccumulation of enzyme proteins is not expected; no finished-product data available.                           |
| 12.4 Mobility in soil                | The liquid phase may disperse in water.                                                                           |
| 12.5 PBT/vPvB assessment             | Available supplier information indicates that the mixture contains no substance meeting the PBT or vPvB criteria. |
| 12.6 Endocrine-disrupting properties | No component identified as having endocrine-disrupting properties in the supplied formulation information.        |
| 12.7 Other adverse effects           | None known; data are limited.                                                                                     |

## SECTION 13

## Disposal considerations

13.1 Waste treatment methods: Dispose of product residues and contaminated packaging through an authorised waste contractor in accordance with local and national requirements. Do not discharge uncontrolled product to drains. Assign the waste code according to the source and actual use of the waste. Empty containers completely before recycling or disposal.

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## SECTION 14

## Transport information

Not classified as dangerous goods under the listed transport regulations.

| Item                            | ADR/RID, IMDG and ICAO-TI/IATA-DGR                                                          |
|---------------------------------|---------------------------------------------------------------------------------------------|
| 14.1 UN number or ID number     | Not assigned                                                                                |
| 14.2 UN proper shipping name    | Not assigned                                                                                |
| 14.3 Transport hazard class     | Not regulated                                                                               |
| 14.4 Packing group              | Not assigned                                                                                |
| 14.5 Environmental hazards      | Not classified as environmentally hazardous for transport                                   |
| 14.6 Special precautions        | Keep containers tightly closed, upright and protected from damage and extreme temperatures. |
| 14.7 Maritime transport in bulk | Not applicable to the product as supplied.                                                  |

## SECTION 15

## Regulatory information

15.1 Safety, health and environmental regulations: UK REACH Regulation and GB CLP Regulation, as assimilated and amended in Great Britain; Control of Substances Hazardous to Health Regulations 2002 (COSHH), as amended. Users must also comply with applicable environmental, waste and workplace legislation.

EU/EEA and Northern Ireland supply: Supply into these markets is subject to EU REACH and EU CLP requirements. The responsible EU/EEA or Northern Ireland supplier must provide the applicable local-language SDS and complete any required poison-centre notification/UFI obligations.

15.2 Chemical safety assessment: No chemical safety assessment has been supplied for this mixture.

## SECTION 16

## Other information

Full hazard-statement wording:

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

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

Abbreviations: ADR = Agreement concerning the International Carriage of Dangerous Goods by Road; CLP = Classification, Labelling and Packaging; COSHH = Control of Substances Hazardous to Health; EC = European Community; IATA = International Air Transport Association; IMDG = International Maritime Dangerous Goods; PBT = persistent, bioaccumulative and toxic; REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals; STOT = specific target organ toxicity; vPvB = very persistent and very bioaccumulative.

Classification method: Based on the product-classification review and the disclosed component information. Review is required if the formulation, supplier classification or physical form changes.

Revision: Version 2.3, issued 02.09.2026. Corporate logo and colour palette updated; classification unchanged. Revision 2.2 updated design, typography and pagination. Revision 2.1 removed the former STOT SE 3 respiratory-tract irritation classification after review; the health-hazard pictogram and H334 remain applicable. Removed the former respiratory-tract irritation classification while retaining the source-declared enzyme concentration and physical-property data.

Training advice: Personnel must be trained in safe handling of enzyme preparations, prevention of airborne exposure, spill response and correct use of personal protective equipment.

Disclaimer: The information describes the product for health, safety and environmental purposes and is not a guarantee of any specific property. It is based on the information available at the issue date. Users remain responsible for assessing suitability and complying with applicable law.

**THIS SAFETY DATA SHEET SUPERSEDES ALL PREVIOUS ENGLISH EDITIONS.**