

Date of issue: 10.06.2005 Replaces Data Sheet of: –
 "*" alterations as compared to previous version;
 n.ap. = not applicable; n.av. = not available



1 Identification of Substance / Preparation and Company

1.1 Identification of Substance or Preparation

Trade Name: Proteinase K
Article No.: –
Component of: GenoType DNA Isolation Kit

1.2 Use of the substance / preparation:

Analytics, Diagnostics

1.3 Company / Supplier Identification

1.3.1 Address of the Company / Supplier:
 Hain Lifescience GmbH, Hardwiesenstr. 1, D – 72147 Nehren
 Telephone: +49 (0)-30-94 89-3796, Fax: +49-30-94 89-3795

1.4 Emergency - Telephone

Informing Department Emergency-Telephone of Company / Undertaking
 Telephone: +49 (0) 7473 / 9451 – 30 Telephone: +49 (0) 7473 / 9451 – 0

2 Composition / Information on Ingredients

2.1 Chemical Characterisation:

Enzyme Buffer

2.2 Dangerous Ingredients:

CAS - No.	Index - No.	EEC-No.	Material	m%-range	Symbol	R-phrases
39450-01-6	647-014-00-9	254-457-8	Proteinase K	> 98%	Xn	R 36/37/38-42

Remarks: Classification and labelling of a product is indicated under item 15.

3 Hazards Identification

3.1 For Humans (additional information is given under item 11):

Irritating to eyes, respiratory system and skin. May be harmful if swallowed.
 May cause sensitization by inhalation.

3.2 For the Environment:

Product may soil public waters by raising overall contamination.

3.3 For Materials:

None.

4 First Aid Measures

4.1 Inhalation:

Remove from danger area and provide for fresh air.
 If symptoms persist, consult physician.

4.2 Skin Contact:

In case of contact with skin wash off immediately with water.
 If irritation persists consult physician.

4.3 Eye Contact:

In case of contact with eyes rinse thoroughly with water. If symptoms persist, consult physician.

4.4 Ingestion:

Rinse mouth out and drink plenty of water.
 Call physician.

4.5 Note to Physician:

Symptomatic treatment.

4.6 Special Equipment:

n.av.

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Tradename: **Binding Buffer B6**

Company / Distributor Hain Lifescience GmbH, Hardwiesenstr. 1, D – 72147 Nehren

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5 Fire Fighting Measures

5.1 Suitable Extinguishing Media: Water, foam, dry chemicals, CO₂.

5.2 Extinguishing Media to Avoid: None.

5.3 Fire and Explosion Hazards:

In case of fire, product may form: Organic crackproducts and carbon oxides, inorganic dust

5.4 Additional Information: None.

5.5 Special Protective Equipment:

Wear positive pressure self-contained breathing apparatus.

Wear full protective clothing.

6 Accidental Release Measures

6.1 Personal Precautions:

See No. 8.3 Personal Protective Equipment.

6.2 Environmental Precautions and Methods for Cleaning up:

Do not allow larger quantities to enter drainage / surface-water / ground-water.

Keep clear of dust. Cleaning measures must be done under respiratory protection.

Dispose of absorbed material in accordance with the regulations. Flush away residues with water.

6.3 Further Information: None.

7 Handling and Storage (For national regulations refer to item 15.2)

7.1 Handling

7.1.1 Precautions for Safe Handling:

Keep container tightly closed. Close container straight after use or if empty.

7.1.2 Precautions in Case of Fire and Explosion:

Dust can form an explosive mixture with air.

7.2 Storage

7.2.1 Storage Instructions:

No special measures necessary if used correctly.

7.2.2 Store away from:

Store away from oxidizers.

7.2.3 Further Information on Storage Conditions:

Recommended storage temperature: -20°C.

7.2.4 Storage Class: 11 (VCI - Concept)

8 Exposure Controls and Personal Protection

8.1 Information on System Design:

Provide for sufficient exhaustion. Provide personal protective equipment.

8.2 Exposure Limits:

8.2.1 Material

Proteinase

Limit Value:

K TLV 6 mg / m³ (respirable fraction)

8.3 Personal Protective Equipment

8.3.1 General Protection and Hygiene:

Do not inhale dust. Avoid prolonged and / or repeated contact with skin. Avoid contact with eyes.

Remove contaminated, saturated clothing immediately. Do not eat, drink or smoke during work.

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- 8.3.2 Respiratory Protection: Breathing apparatus in the event of aerosol or mist formation. Filter P2
- 8.3.3 Hand Protection: Impermeable gloves
- 8.3.4 Eye Protection: Tightly fitting goggles
- 8.3.5 Skin Protection: Light protective clothing
- 8.3.6 Further Information: Refer to special restrictions in wearing protective equipment

9 Physical and Chemical Properties

9.1 Appearance

- 9.1.1 Form: Powder
- 9.1.2 Colour: white
- 9.1.3 Odour: almost odourless

9.2 Safety Relevant Data

- 9.2.1 pH-value, undiluted: n.av. pH-value, 1% aqueous solution: n.av.
- 9.2.2 Boiling point / Boiling - range (°C): n.av. Melting point / Melting range (°C): n.av.
- 9.2.3 Flash point (°C, c.c.): n.ap.
- 9.2.4 Flammability (EEC A10/A13): n.ap.
- 9.2.5 Ignition temperature (°C): n.ap.
- 9.2.6 Autoflammability (EEC A16): n.ap.
- 9.2.7 Oxidising properties: None.
- 9.2.8 Explosion hazard: No.
- 9.2.9 Explosion limits (Vol.%) lower: None. upper: None.
- 9.2.10 Vapour pressure: n.av.
- 9.2.11 Density (g/ml): n.av.
- 9.2.12 Solubility (in Water): Soluble Soluble in: Methanol
- 9.2.13 Partition coefficient, n-Octanol/Water: n.av.
- 9.2.14 Viscosity: n.ap.
- 9.2.15 Solvent separation test: n.ap.
- 9.2.16 Solvent content (m %): n.ap.

9.3 Further Data

- 9.3.1 Thermal decomposition (°C): > 20
- 9.3.2 Vapour density (Air = 1): n.ap.
- 9.3.3 Evaporation rate: n.av.

10 Stability and Reactivity

10.1 Conditions to Avoid:

In presence of air increasing of fine-dust may lead to dust-explosion hazard.

10.2 Materials to Avoid:

Reactions with strong oxidizing agents.

10.3 Hazardous Decomposition Products:

No dangerous decomposition products when properly handled.

10.4 Further Information:

None.

11 Toxicological Information

11.1 Toxicological Tests:

11.1.1 Acute Health Effects:

- Inhalation, LC50 rat, (mg/l/4h): n.av.
- Ingestion, LD50 rat, (mg/kg): n.av.
- Skin - contact, LD50 rat, (mg/kg): n.av.
- Irritation (to skin / eye): Irritant
- Sensitisation: May cause sensitization by inhalation.

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- 11.1.2 Subacute / Chronic Toxicity:
Carcinogenicity: n.av.
Mutagenicity: n.av.
Teratogenicity: n.av.
Narcotic Effects: None.

11.2 Practical Experience

11.2.1 Observations relevant for classification: None.

11.2.2 Further Observations: None.

11.3 General Remarks:

Classification of the preparation has been done by calculation in accordance with EEC directives.

12 Ecological Information

12.1 Ecotoxic Effects, Aquatic Toxicity:

According to present knowledge no negative ecological reactions are to be expected.

12.2 Behaviour in Sewage Works:

Mobility and Accumulation Potential: n.av.

12.3 Elimination (Persistence and Degradability):

The product is biodegradable.

12.4 Other Ecological Information

12.4.1 COD-Value, mg/g: n.av.

12.4.2 BOD5-Value, mg/g: n.av.

12.4.3 AOX-Remarks: n.ap.

12.4.4 Significant Components: None.

12.4.5 Other adverse effects: None.

13 Disposal Considerations (For national Regulations refer to item 15.)

13.1 Residues

13.1.1 Recommendation: R 2 / D 10 Waste - Code - No.: 07 07 01

In addition comply with the regional authorities.

13.1.2 Safe Handling: See item 7 and 15.

13.2 Contaminated Packaging

13.2.1 Recommendation: Wash with suitable cleaner. Otherwise as described under Residues.

13.2.2 Safe Handling: As described under Residues.

14 Transport Information

14.1 Transportation by Road or Railway according to ADR/GGVS and RID/GGVE

Remarks: No dangerous goods according to ADR

Class: Classification Code: Packing Group:

Hazard-No.: UN-No.:

14.1.1 Instruction Concerning Shipper's Declaration and Packaging:

Volume or Mass Name and Description Risklabel Packing – Code or instruction

14.2 Classification for Transportation by Inland-Navigation according to ADNO/GGVBinSch

Remarks: Classification has not been done.

Class: Division: Category:

14.2.1 Description of Goods:

14.2.2 Remarks:

14.3 Classification for Transportation by Vessels according to IMDG/GGVSee

Remarks: No dangerous goods according to IMDG

Class: UN-No.: Packing Group:

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- 14.3.1 EmS-No.: (MFAG-Table:)
- 14.3.2 Marine Pollutant:
- 14.3.3 Instruction for Declaration and Labelling:
(Packing sizes with possible exemptions not considered)
Proper Shipping Name: Risk Label:
- 14.3.4 Remarks:
- 14.4 Classification for Transportation by Aeroplane according to IATA-DGR/ICAO-TI**
Remarks: No dangerous goods according to IATA-DGR
Class: UN-No.: Packing Group:
- 14.4.1 Instruction for Declaration and Labelling:
(Packing sizes with possible exemptions not considered)
Proper Shipping Name: Risk Label:
Packing Instructions, Passenger: Cargo:
- 14.4.2 Remarks:

15 Regulatory Information

15.1 Classification according to EEC-Regulations:

Classification required by EEC: Yes.

Hazard Identification: Harmful

Component(s): "254-457-8" Proteinase K "EC-Labeling"

R-Phrases:

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 42: May cause sensitization by inhalation.

S-Phrases:

[S 2: Keep out of reach of children.]

S 22: Do not breathe dust.

S 24: Avoid contact with skin.

S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 / 37: Wear suitable protective clothing and gloves.

Additional Markings:

(Attach tactile warning of danger.)

- 15.1.1 The above mentioned labelling is valid for distribution to industrial user.
Labelling (formats, exemptions, additional markings) has to be done according to respective regulations.

15.2 National Regulations (valid for Germany only)

15.2.1 Beschäftigungsbeschränkung nach MuSchG / JArbSchG beachten: Yes.

15.2.2 Aufbewahrungspflicht nach § 8 (6) GefStoffV beachten: Yes.

15.2.3 Störfallverordnung beachten: No.

15.2.4 Klassifizierung nach VbF: . No.

15.2.5 Technische Anleitung Luft: Klasse Ziffer Anteil m%
n.ap.

15.2.6 Wassergefährdungsklasse: 1 (Classification according to VwVwS)

15.2.7 Regelungsbereich der TRGS 514 beachten: No.

15.2.8 Regelungsbereich der TRGS 515 beachten: No.

15.2.9 Regelungsbereich der TRG 300 beachten: No.

15.2.10 Regelungsbereich des WRMG beachten: Yes.

15.2.11 Gesundheitsschädlich i.S.d. § 2 Abs. 3 der Verpackungsverordnung: Yes.

15.2.12 Sonstige zu beachtende Vorschriften: None.

Applicable Exemptions: No.

Hazard Symbol(s):



16 Other Information

Risk-Phrases

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 42: May cause sensitization by inhalation.

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This Material Safety Data Sheet relates to 2001/58/EEC and TRGS 220.

The statements in this Material Safety Data Sheet were made to the best of our knowledge and are as accurate as possible. They are given for information only. They do not constitute a contractual guarantee of a product's properties. They must neither be altered nor transferred to other products.