

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

Identification of the substance or mixture

Product code AP014
Product name PROTEINASE K

Company/undertaking identification

Life Technologies
5791 Van Allen Way
PO Box 6482
Carlsbad, CA 92008
+1 760 603 7200

Life Technologies
5250 Mainway Drive
Burlington, ONT
CANADA L7L 6A4
800/263-6236

24 hour Emergency Response:

866-536-0631
301-431-8585
Outside of the U.S. +1-301-431-8585

Country specific Emergency Number (if available):

CHEMTREC Brazil (Rio De Janeiro) +(55)-2139581449 (português)

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

SECTION 2: Hazards identification

GHS - Classification

Signal Word

DANGER



Health hazards

| | |
|---------------------------|------------|
| Skin corrosion/irritation | Category 3 |
| Respiratory sensitization | Category 1 |

Physical hazards

Not Hazardous

Hazard Statements

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

H316 - Causes mild skin irritation

Precautionary Statements

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

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

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

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

P284 - Wear respiratory protection

Principle Routes of Exposure

Potential Health Effects

| | |
|-------------------|--|
| eyes | May cause eye irritation with susceptible persons. |
| Skin | Mild skin irritation. |
| inhalation | May be harmful by inhalation. |
| Ingestion | May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

Specific effects

| | |
|------------------------------|--|
| Carcinogenic effects | None. |
| Mutagenic effects | None. |
| Reproductive toxicity | None. |
| Sensitization | R42 - May cause sensitization by inhalation. |

| | |
|-----------------------------|-----------------------------------|
| Target Organ Effects | None under normal use conditions. |
|-----------------------------|-----------------------------------|

HMIS

| | |
|--------------|---|
| Health | 4 |
| Flammability | 0 |
| Reactivity | 0 |

SECTION 3: Composition/information on ingredients

| Chemical Name | CAS-No | EINECS-No | Weight % |
|---------------|------------|-----------|----------|
| Glycerol | 56-81-5 | - | <0.1 |
| Proteinase K | 39450-01-6 | 254-457-8 | <2.5 |

We recommend handling all chemicals with caution.

SECTION 4: First aid measures

| | |
|---------------------|--|
| Skin contact | Wash off immediately with plenty of water for at least 15 minutes. Take off all contaminated clothing and wash it before reuse. Immediate medical attention is required. |
| Eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Ingestion | Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. |

inhalation Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled, H316 - Causes mild skin irritation

Notes to Physician Treat symptomatically.

SECTION 5: Firefighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.
Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.
Specific hazards arising from the chemical Not known

SECTION 6: Accidental release measures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Use personal protection equipment.
Methods for cleaning up Soak up with inert absorbent material.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

See Section 12 for more information.

SECTION 7: Handling and storage

Handling Always wear recommended Personal Protective Equipment. No special handling advices are necessary.
Storage Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

SECTION 8: Exposure controls/personal protection

Exposure Limits

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

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Personal Protective Equipment requirements are dependent on the user institution's risk assessment and are specific to the risk assessment for each laboratory where this material may be used.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Impervious gloves.

Eye protection Wear safety glasses with side shields (or goggles).

Skin and Body Protection Lightweight protective clothing.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: Physical and chemical properties**General information**

| | | |
|---|-----------------------------|----------------------|
| Form | Liquid | |
| Appearance | No information available | |
| Odor | Mixture has not been tested | |
| Odor Threshold | Mixture has not been tested | |
| Boiling point / boiling range | °C No data available | °F No data available |
| Melting point / melting range | °C No data available | °F No data available |
| flash point | °C No data available | °F No data available |
| Autoignition Temperature | °C No data available | °F No data available |
| Evaporation rate | No data available | |
| Flammability (solid, gas) | No data available | |
| Oxidizing properties | Mixture has not been tested | |
| Water solubility | soluble | |
| Upper explosion limit | No data available | |
| Lower explosion limit | No data available | |
| Partition coefficient: n-octanol/water | No data available | |
| Vapor Pressure | No data available | |
| vapor density | No data available | |
| Viscosity | Mixture has not been tested | |

SECTION 10: Stability and reactivity

| | |
|---|--|
| Stability | Stable under normal conditions. |
| Materials to avoid | No information available. |
| Possibility of hazardous reactions | Hazardous reaction has not been reported |
| Hazardous decomposition products | No information available. |
| polymerization | None under normal processing. |
| Conditions to avoid | None under normal processing. |

SECTION 11: Toxicological information**Acute Toxicity**

| Chemical Name | LD50 (oral, rat/mouse) | LD50 (dermal, rat/rabbit) | LC50 (inhalation, rat/mouse) |
|----------------------|-------------------------------|----------------------------------|-------------------------------------|
| Glycerol | No data available | No data available | >570mg/m ³ (Rat) |
| Proteinase K | No data available | No data available | No data available |

Principle Routes of Exposure**Potential Health Effects**

| | |
|------------------------------|--|
| eyes | May cause eye irritation with susceptible persons. |
| Skin | Mild skin irritation. |
| inhalation | May be harmful by inhalation. |
| Ingestion | May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Carcinogenic effects | None. |
| Mutagenic effects | None. |
| Reproductive toxicity | None. |
| Sensitization | R42 - May cause sensitization by inhalation. |
| Target Organ Effects | None under normal use conditions |

SECTION 12: Ecological information

| | |
|------------------------|---------------------------|
| Ecotoxicity | No information available. |
| Mobility | see log Pow. |
| Biodegradation | No information available. |
| Bioaccumulation | No information available. |

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|---------------|-----------------------|-----------------|------------------------------|---------------|-------------|
| Glycerol | | | | | logPow-1.76 |

SECTION 13: Disposal considerations

Dispose of contents/containers in accordance with local regulations.

SECTION 14: Transport information**IATA**

| | |
|------------------------------|---|
| Proper Shipping Name | No dangerous good in sense of these transport regulations |
| Hazard Class | None |
| Subsidiary class | None |
| Packing group | None |
| UN-No | none |
| Environmental hazards | None |

SECTION 15: Regulatory information

| Component | US TSCA |
|-------------------------------------|---------|
| Glycerol 56-81-5 (<0.1) | Listed |
| Proteinase K 39450-01-6 (<2.5) | - |

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

| Chemical Name | Massachusetts - RTK | New Jersey - RTK | Pennsylvania - RTK | Illinois - RTK | Rhode Island - RTK |
|---------------|---------------------|------------------|--------------------|----------------|--------------------|
| Glycerol | Listed | - | Listed | - | Listed |
| Proteinase K | - | - | - | - | - |

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

Reason for revision

SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

"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