Safety Data Sheet
acc. to OSHA HCS

Printing date 01/05/2026 Reviewed on 01/04/2026

*
1 Identification

Product identifier
Trade name: Proteinase K
Article number: V3021
CAS Number:
39450-01-6
EC number:
254-457-8
Application of the substance / the mixture For Laboratory Use

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: productstewardship@promega.com

Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

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2 Hazard(s) identification

Classification of the substance or mixture



GHS08 Health hazard

Sensitization - Respiratory 1	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irritation 2	H315 Causes skin irritation.
Eye Irritation 2A	H319 Causes serious eye irritation.
Specific Target Organ Toxicity - Single Exposure 3	H335 May cause respiratory irritation.

Label elements
GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).

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Hazard pictograms



GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:
Proteinase, Tritirachium album serine
Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves / eye protection / face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = *2
Fire = 0
Reactivity = 0
OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Irritant
Sensitizer
Primary route(s) of entry:
Dermal
Inhalation
Target Organ(s):
Affects Pulmonary system (Lungs)
Risk of damage to eyes
Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable

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vPvB: *Not applicable*

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3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
39450-01-6 Proteinase, Tritirachium album serine
EC number: *254-457-8*

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4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact: *Immediately wash with water and soap and rinse thoroughly.*
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: *If the patient feels unwell or is concerned, obtain medical advice.*
Information for doctor:
Most important symptoms and effects, both acute and delayed *Allergic reactions*
Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture
None known
No further relevant information available.
Advice for firefighters *No special advice.*

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Avoid formation of dust.
Wear protective clothing.
Environmental precautions: *No special measures required.*
Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to Section 13.
Pick up mechanically.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.

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See Section 13 for disposal information.

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7 Handling and storage

Handling:
Precautions for safe handling
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Work only in fume cabinet.
Information about protection against explosions and fires:
Keep respiratory protective device available.
The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: *Store in a cool location.*
Information about storage in one common storage facility: *Not required*
Further information about storage conditions: *Keep receptacle tightly sealed.*
Specific end use(s) *No further relevant information available.*

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8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace: *Not required.*
Additional information: *The lists that were valid during the creation were used as basis.*

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Breathing equipment:
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
Protection of hands:
Not required
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Material of gloves
Gloves impermeable to the specific chemical substance.
Please observe the instructions regarding permeability and breakthrough time which are provided by the manufacturer/supplier of the gloves. Ensure gloves are suitable for the task which includes, but is not limited to, chemical compatibility, dexterity, operational conditions, user susceptibility, e.g., sensitization effects. Consider specific local conditions under which the product is used such as the danger of cuts and abrasion. Remove gloves with care to avoid skin contamination.
Eye protection:
Safety glasses

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Use equipment for eye protection tested and approved under government NIOSH standards.

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9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:

Form:	Powder
Color:	White
Odor:	Not determined
Odor threshold:	Not determined
pH-value:	Not applicable
Change in condition	
Melting point/Melting range:	Undetermined
Boiling point/Boiling range:	Undetermined
Flash point:	Not applicable
Flammability:	Product is not flammable.
Decomposition temperature:	Not determined
Ignition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not applicable
Density at 20 °C (68 °F):	1.1 g/cm³ (9.1795 lbs/gal)
Relative density	Not determined
Vapor density	Not applicable
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable
VOC content:	0.00 %
Solids content:	100.0 %
Other information	No further relevant information available.

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10 Stability and reactivity

Reactivity No further relevant information available.
Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.

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Hazardous decomposition products: *No dangerous decomposition products known.*

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11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification: *No data available*
Primary irritant effect:
on the skin: *Causes skin irritation.*
on the eye: *Irritating effect.*
Sensitization: *Sensitization possible through inhalation.*
Additional toxicological information: *The substance is not subject to classification.*

Carcinogenic categories
IARC (International Agency for Research on Cancer) *Substance is not listed.*
NTP (National Toxicology Program) *Substance is not listed.*
OSHA-Ca (Occupational Safety & Health Administration) *Substance is not listed.*

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12 Ecological information

Toxicity
Aquatic toxicity: *Not harmful to the aquatic environment*
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil *No further relevant information available.*
Ecotoxicological effects:
Remark: *Not available*
Additional ecological information:
General notes: *Not available.*
Results of PBT and vPvB assessment
PBT: *Not applicable*
vPvB: *Not applicable*
Other adverse effects *No further relevant information available.*

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13 Disposal considerations

Waste treatment methods
Recommendation:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: *Disposal must be made according to official regulations.*
Recommended cleansing agent: *Water, if necessary with cleansing agents.*

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14 Transport information

UN-Number **DOT, ADR, ADN, IMDG, IATA**	Not hazardous for transportation Not applicable
UN proper shipping name **DOT, ADR, ADN, IMDG, IATA**	None Not applicable
Transport hazard class(es)	None
DOT, ADR, ADN, IMDG, IATA **Class**	Not applicable
Packing group **DOT, ADR, IMDG, IATA**	None Not applicable
Environmental hazards: **Marine pollutant:**	No
Special precautions for user	Not applicable
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
UN "Model Regulation":	Not applicable

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15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara
Section 355 (extremely hazardous substances): Substance is not listed.
Section 313 (Specific toxic chemical listings): Substance is not listed.
TSCA (Toxic Substances Control Act) Inventory: Substance is not listed.
Hazardous Air Pollutants Substance is not listed.
Proposition 65
Chemicals known to cause cancer: Substance is not listed.
Chemicals known to cause reproductive toxicity for females: Substance is not listed.
Chemicals known to cause reproductive toxicity for males: Substance is not listed.
Chemicals known to cause developmental toxicity: Substance is not listed.
New Jersey Right-to-Know List: Substance is not listed.
Pennsylvania Right-to-Know List: Substance is not listed.

Cancerogenity categories
EPA (Environmental Protection Agency) Substance is not listed.
TLV (Threshold Limit Value) Substance is not listed.
NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
Signal word Danger

Hazard-determining components of labeling:
Proteinase, Tritirachium album serine
Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Precautionary statements
Avoid breathing dust/fume/gas/mist/vapors/spray

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Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves / eye protection / face protection.
[In case of inadequate ventilation] wear respiratory protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a poison center/doctor if you feel unwell.
Take off contaminated clothing and wash it before reuse.
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Chemical safety assessment

Water hazard class: *Generally not hazardous for water.*
Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

16 Other information

**This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

Department issuing SDS:
Promega Corporation
Product Stewardship
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330
productstewardship@promega.com
Contact:
Date of preparation / last revision *01/05/2026 / 10.0*
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Sensitization - Respiratory 1: Respiratory sensitisation – Category 1
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3