

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 23.06.2008

Revision: 23.06.2008

1 Identification of substance

Trade name: Alkaline Protease Solution

Article number: A144

Application of the substance / the preparation: Laboratory chemicals

Manufacturer/Supplier:

Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-608-274-4330
1-800-356-9526

MSDS author: Regulatory.Affairs@promega.com

Further information obtainable from:

Promega UK Ltd.
Delta House
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Southampton SO16 7NS
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Tel: (44) 23 8076 0225
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FREEPHONE: 0800 378994
E-mail Address: ukcustserve@promega.com
Web Address: www.promega.com/uk/

Information in case of emergency:

CHEMTREC 1-800-424-9300

For call originating outside the United States dial 001-703-527-3887

2 Hazards identification

Hazard description:



Xn Harmful

Information concerning to particular hazards to man and environment

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 37/38 Irritating to respiratory system and skin.

R 42 May cause sensitisation by inhalation.

Classification system:

The classification is in line with current EC lists. It is extended, by information from technical literature and company information.

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3 Composition/information on ingredients

Chemical characterization

Description: Mixture of substances listed below with nonhazardous additions.

Components:

CAS: 9014-01-1 EINECS: 232-752-2	Subtilisin	☒ Xn, ☒ Xi; R 37/38-42	25-50%
CAS: 57-55-6 EINECS: 200-338-0	propane-1,2-diol		20-25%
CAS: 1330-43-4 EINECS: 215-540-4	disodium tetraborate, anhydrous		1.0-5.0%

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

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

After skin contact: Immediately wash with soap, water and rinse thoroughly.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

5 Fire fighting measures

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

6 Accidental release measures

Person-related safety precautions: Not required.

Measures for environmental protection:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage

Handling

Information for safe handling:

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

No special precautions are necessary if used correctly.

Information about fire - and explosion protection: No special measures required.

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

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Further information about storage conditions: Keep receptacle tightly sealed.

8 Exposure controls and personal protection gear

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

Ingredients with limit values that require monitoring at the workplace:

57-55-6 propane-1,2-diol

WEL	Long-term value: 474* 10** mg/m ³ , 150* ppm *total vapour and particulates **particulates
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1330-43-4 disodium tetraborate, anhydrous

WEL	Long-term value: 1 mg/m ³
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Additional information: The lists valid during the making were used as basis.

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 skin.

Avoid contact with the eyes and skin.

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protection of hands:

Protective gloves.

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.

Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

General Information

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic

Change in condition

Melting point/Melting range: undetermined

Boiling point/Boiling range: 100°C

Flash point:	Not applicable
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Ignition temperature:	371°C
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Self-igniting:	Product is not selfigniting.
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Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	2.6 Vol %
Upper:	12.6 Vol %
Vapour pressure at 20°C:	0.1 hPa
Density at 20°C:	1.057 g/cm ³
Solubility in / Miscibility with	
Water:	Fully miscible
Solvent content:	
Organic solvents:	25.0 %
Water:	21.8 %
Solids content:	3.2 %

10 Stability and reactivity

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

Dangerous reactions: No dangerous reactions known

Dangerous decomposition products: No dangerous decomposition products known

11 Toxicological information

Acute toxicity:

LD/LC50 values relevant for classification:

9014-01-1 Subtilisin

Oral LD50 2000 mg/kg (Rat)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through inhalation.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Harmful

Irritant

Sensitisation May cause sensitisation by inhalation.

12 Ecological information

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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13 Disposal considerations**Product:****Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

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

14 Transport information

Contact Promega Safety Department for additional transport information.

Land transport ADR/RID (cross-border)

ADR/RID class: -
Not regulated

Maritime transport IMDG:

IMDG Class: -
Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -

15 Regulations**Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

Hazard-determining components of labelling:

Subtilisin

Risk phrases:

37/38 Irritating to respiratory system and skin.
42 May cause sensitisation by inhalation.

Safety phrases:

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.

National regulations**Technical instructions (air):**

Class	Share in %
Water	21.8
I	50.0
NK	25.0

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Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.**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.

Relevant R-phrases

37/38 Irritating to respiratory system and skin.

42 May cause sensitisation by inhalation.

Department issuing MSDS:

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Safety Department

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U.S.A.

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*** Data compared to the previous version altered.**

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