

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

ProductName : Carboxypeptidase A, from bovine pancreas

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Highly flammable. May cause sensitization by inhalation. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Carboxyolypopeptidase
Peptidyl-L-amino-acid hydrolase

CAS-No.	EC-No.	Classification	Concentration
Carboxypeptidase A			
11075-17-5	234-297-5	-	>= 1,5 - <= 3 %
Toluene			
108-88-3	203-625-9	- F, Xn, Repr. Cat.3, R11 - R38 - R48/20 - R63 - R65 - R67	<= 10 %
Water			
7732-18-5	231-791-2	-	<= 87 %

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray, solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form suspension

Safety data

pH no data available

Melting point no data available

Boiling point no data available

Flash point 4 °C

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Density 1,000 g/cm³

Water solubility no data available

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents, Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

no data available

IARC:

3 - Group 3: Not classifiable as to its carcinogenicity to humans (Toluene)

Signs and Symptoms of Exposure

Lung irritation, chest pain, pulmonary edema, lesions of the penis, prepuce, and scrotum in animals. Development of inflammatory and ulcerous lesions of the penis, prepuce, and scrotum in animals.

Potential Health Effects

SkIn Harmful if inhaled. May absorb through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed. Aspiration hazard if swallowed - can enter lungs and cause damage.

Target Organs Bladder, Liver, Kidney, Brain.

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

Eye protection

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Skin and body protection

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12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

no data available

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/Number

UN-Number: 1294 Class: 3

Packing group: II

EMS-No: F-E, S-D

Proper shipping name: TOLUENE, SOLUTION

IMDG

UN-Number: 1294 Class: 3

Proper shipping name: Toluene, solution

Packing group: II

EMS-No: F-E, S-D

Marine pollutant: No

IATA

UN-Number: 1294 Class: 3

Proper shipping name: Toluene, solution

Packing group: II

EMS-No: F-E, S-D

Proper shipping name: TOLUENE, SOLUTION

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazard symbols

Fn Highly flammable

Xn Harmful if absorbed through skin

R-phrase(s)

R42 May cause sensitization by inhalation

R43/20 Harmful if inhaled. May cause serious damage to health by prolonged exposure through inhalation

R63 Possible risk of harm to the unborn child

R65 Harmful: may cause lung damage if swallowed

S-phrase(s)

S16 Keep away from sources of ignition - No smoking

S23 Do not breathe vapour

S25 Wear protective clothing and gloves

S45 In case of accident or if you feel unwell, seek medical advice immediately (show this label)

S62 If swallowed or if inhaled: induce vomiting. seek medical advice immediately and show this label or container or label

Hazardous components which must be listed on the label:

108-88-3 Toluene

11075-17-5 Carboxypeptidase A

Text of R-phrases mentioned in Section 3

R11 Highly flammable

R38/Irritating to skin

R43/Irritating to eyes

R63 Harmful: may cause lung damage if swallowed

R65 Vapours may