



Material Safety Data Sheet

1 IDENTIFICATION OF SUBSTANCE:

- **Trade name:** **TrypZean®**
- **Product description:** Recombinant trypsin from maize
- **Product Number:** TRY
- **Manufacturer/Supplier:**
Applied Biotechnology Institute.
Building 83, Suite 1D
Cal Poly Technology Park
San Luis Obispo, CA 93407 USA
(805) 756-6458

2 COMPOSITION/DATA ON COMPONENTS:

- **CAS No. Description:** 9002-07-7 Trypsin
- **EC Number:** 2326508

3 HAZARDS IDENTIFICATION:

- **Hazard description** Xn Harmful
- **Information pertaining to particular dangers for man and environment**
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 42 May cause sensitization by inhalation. Target organ: Lungs
- **NFPA ratings (scale 0-4)**
Health = 2
Fire = 0
Reactivity = 0
- **HMIS Ratings**
Health = *1
Flammability = 0
Reactivity = 0

4 FIRST AID MEASURES

- **General information**
Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.
- **After inhalation**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient in stable side position for transportation.
- **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** Immediately call a doctor.

5 FIRE FIGHTING MEASURES

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Protective equipment:** Mount respiratory protective device.

6 ACCIDENTAL RELEASE MEASURES

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
- **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

- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage:** Away from heat; in a cool, dry place.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class according to regulation on flammable liquids:** Not Applicable

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

- **Additional information about design of technical systems:** No further data; see item 7.
- **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.
- **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 and skin.
- **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:** Protective gloves.
- **Eye protection:** Safety glasses

9 PHYSICAL AND CHEMICAL PROPERTIES:

- **Form:** Powder
- **Color:** White
- **Odor:** Characteristic
- **Melting point/Melting range:** undetermined
- **Boiling point/Boiling range:** undetermined
- **Flash point:** Not applicable
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with**
- **Water:** Not miscible or difficult to mix
- **Organic solvents:** 0.0 %
- **Solids content:** 100.0 %

10 STABILITY AND REACTIVITY

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:**
No dangerous decomposition products known

11 TOXICOLOGICAL INFORMATION

- **Acute toxicity:** LD50: (ORAL, RAT) >5 G/KG
- **Primary irritant effect:**
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization:
Sensitization possible through inhalation.
Sensitization possible through skin contact.

12 ECOLOGICAL INFORMATION:

- **General notes:** No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention. Generally not hazardous for water.

13 DISPOSAL CONSIDERATION

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber, or deliver to chemical disposal company. Observe all federal, state, and local environmental regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

14 TRANSPORT INFORMATION

Not subject to transport regulations. Contact Applied Biotechnology Institute for additional transportation information.

15 REGULATIONS

TSCA (Toxic Substance Control Act):

9002-07-7 Trypsin

- **Markings:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
- **Code letter and hazard designation of product:** Xn Harmful
- **Risk phrases:**
36/37/38 Irritating to eyes, respiratory system and skin.
42 May cause sensitization by inhalation.
- **Safety phrases:**
2 Keep out of the reach of children.
22 Do not breathe dust.
24 Avoid contact with skin.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.
- **Water hazard class:** Generally not 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.