

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

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Zolvstat™ Multi-Enzymatic Detergent  
Product code : 1225

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Industrial/Professional use spec : Product for hospital and professional use only. Not for home use.  
Use of the substance/mixture : Multi-Enzymatic Detergent

#### 1.3. Details of the supplier of the safety data sheet

STERIS Corporation  
P. O. Box 147, St. Louis, MO 63166, US  
Telephone Number for Information: 1-800-548-4873 (Customer Service-Healthcare Products)

#### 1.4. Emergency telephone number

Emergency number : US Emergency Telephone No.1-314-535-1395 (STERIS); 1-800-424-9300 (CHEMTREC)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Resp. Sens. 1 H334

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Danger  
Hazard statements (GHS-US) : H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
Precautionary statements (GHS-US) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P284 - In case of inadequate ventilation, wear respiratory protection  
P304+P341 - IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing  
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor

#### 2.3. Other hazards

No additional information available.

#### 2.4. Unknown acute toxicity (GHS-US)

No data available.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable.

Full text of H-phrases: See section 16.

#### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Glycerin	(CAS No) 56-81-5	5 - 10	Not classified
Subtilisins (proteolytic enzymes)	(CAS No) 9014-01-1	0.1 - 1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 STOT SE 3, H335

# Zolvstat™ Multi-Enzymatic Detergent

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Remove patient to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Get medical attention.
- First-aid measures after skin contact : Immediately flush skin with plenty of water for at least 15 minutes. Remove immediately all contaminated clothing. Rinse skin with water. Get medical advice/attention.
- First-aid measures after eye contact : In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.
- First-aid measures after ingestion : If victim completely conscious/alert. Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Give water or milk if the person is fully conscious.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May cause respiratory irritation.
- Symptoms/injuries after inhalation : Inhalation of vapors or spray/mists may cause allergy or asthma symptoms or breathing difficulties. May cause respiratory irritation.
- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes eye irritation.
- Symptoms/injuries after ingestion : Can occur: Gastrointestinal disturbance.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for primary source of fire.

#### 5.2. Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, nitrogen oxides (NOx).

#### 5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire.
- Protective equipment for firefighters : Use self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.
- Other information : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, nitrogen oxides (NOx).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Do not breathe fumes, vapors. Avoid contact with skin, eyes and clothes.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Wear protective gloves and eye/face protection. For further information refer to Section 8: "Exposure controls/personal protection".
- Emergency procedures : Stop leak if safe to do so. Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Comply with applicable local, national and international regulation. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Residue may be washed down with water. Product may be flushed to a sanitary sewer with copious amounts of water, if in accordance with local, state, or national legislation.

# Zolvstat™ Multi-Enzymatic Detergent

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Product for hospital and professional use only. Read label before use. Provide good ventilation in process area to prevent formation of vapor. Avoid all eye and skin contact and do not breathe vapor and mist. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
- Hygiene measures : Take care for general good hygiene and housekeeping. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.
- Storage conditions : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
- Incompatible materials : Strong oxidizing agents.
- Storage temperature : < 32 °C (< 90 °F).
- Storage area : Store in dry, cool, well-ventilated area.
- Special rules on packaging : Correctly labelled.

### 7.3. Specific end use(s)

No additional information available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Subtilisins (proteolytic enzymes) (9014-01-1)		
USA - NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	0.00006 mg/m <sup>3</sup>
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	0.00006 mg/m <sup>3</sup>

Glycerin (56-81-5)		
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>

### 8.2. Exposure controls

- Appropriate engineering controls : Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Protective clothing. Gloves. Protective goggles.



- Hand protection : Wear rubber gloves or latex-free gloves.
- Eye protection : Wear chemical splash goggles.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Work in well-ventilated zones or use proper respiratory protection.
- Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Clear
- Color : Blue
- Odor : Fresh odor
- Odor threshold : No data available
- pH : 8.5 - 9.0

# Zolvstat™ Multi-Enzymatic Detergent

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

pH solution	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: (Approximately) 1.1 g/ml Specific Gravity
Solubility	: Water: Completely soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available.

### 9.2. Other information

No additional information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat. Light.

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide. Nitrogen oxides (NOx).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Causes skin and eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

Zolvstat™ Multi-Enzymatic Detergent	
ATE (oral)	> 2000 mg/kg, rat
ATE (dermal)	> 2000 mg/kg, rabbit
ATE (inhalation)	20 mg/l/4h, rat
Glycerin (56-81-5)	
LD50 oral (rat)	12600 mg/kg
LD50 dermal (rabbit)	> 10 g/kg
LC50 inhalation (rat) (mg/l)	> 570 mg/m <sup>3</sup> (Exposure time: 1h)
Subtilisins (proteolytic enzymes) (9014-01-1)	
LD50 oral rat	1800 mg/kg

# Zolvstat™ Multi-Enzymatic Detergent

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Skin corrosion/irritation	: May cause skin irritation
Serious eye damage/irritation	: May cause eye irritation
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: May cause respiratory irritation
Specific target organ toxicity (repeated exposure)	: Inhalation of vapors or spray/mists may cause allergy or asthma symptoms or breathing difficulties. May cause respiratory irritation
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Glycerin (56-81-5)	
LC50 fishes 1	51 - 57 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [Static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 24 h - Species: Daphnia magna)

### 12.2. Persistence and degradability

Zolvstat™ Multi-Enzymatic Detergent	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

Zolvstat™ Multi-Enzymatic Detergent	
Bioaccumulative potential	Not established.

Glycerin (56-81-5)	
BCF fish 1	(no bioaccumulation)
Log Pow	-1.76

### 12.4. Mobility in soil

No additional information available.

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Do not re-use empty containers.
Additional information	: Empty containers should be thoroughly rinsed with large quantities of clean water. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
Ecology - waste materials	: Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

No dangerous good in sense of transport regulations.

### Additional information

Other information : No supplementary information available.

### ADR

Transport document description : Non-hazardous.

### Transport by sea

IMDG Class : Non-hazardous.

# Zolvstat™ Multi-Enzymatic Detergent

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

### Air transport

ICAO/IATA Class : Non-hazardous.

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Subtilisins (proteolytic enzymes) (9014-01-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

No additional information available.

### 15.3. US State regulations

No additional information available.

### 15.3. Canadian regulations

No additional information available.

## SECTION 16: Other information

Revision Date : 03/29/2016

Full text of H-phrases:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Resp. Sens. 1	Sensitisation — Respiratory, Category 1
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H315	Causes skin irritation
H318	Causes serious eye damage
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation

NFPA health hazard

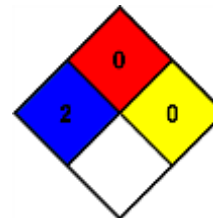
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard

: 0 - Materials that will not burn.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012) - US

*The information on this sheet is not a specification and does not guarantee specific properties. The information is intended to provide general knowledge as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product or where instruction or recommendations are not followed.*