

# Pentazyme

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Date of Issue: 08/15/2025

Version: K

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Pentazyme

**Product Code:** CSC011

**Synonyms:** Pentazyme, Pentazyme Plus

#### 1.2. Intended Use of the Product

**Use of the Substance/Mixture:** Multi-Enzymatic Cleaner for surgical instruments.

#### 1.3. Name, Address, and Telephone of the Responsible Party

##### Company

Case Medical Inc.

50 West St.

Bloomfield, NJ 07003

201-313-1999

[www.casemed.com](http://www.casemed.com)

info@casemed.com

#### 1.4. Emergency Telephone Number

**Emergency Number** : For Hazardous Materials [or Dangerous Goods] Incidents ONLY  
(spill, leak, fire, exposure or accident), call CHEMTREC at  
CHEMTREC®, USA & CANADA: 001 (800) 424-9300

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### GHS-US Classification

Eye Dam. 1 H318

Full text of hazard classes and H-statements : see section 16

#### 2.2. Label Elements

##### GHS-US Labeling

##### Hazard Pictograms (GHS-US)

:



GHS05

##### Signal Word (GHS-US)

: Danger

##### Hazard Statements (GHS-US)

: H318 - Causes serious eye damage.

##### Precautionary Statements (GHS-US)

: P280 - Wear protective gloves, protective clothing, and eye protection.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a poison center or doctor.

#### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

#### 2.4. Unknown Acute Toxicity (GHS-US)

No data available

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substance

Not applicable

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### 3.2. Mixture

| Name                              | Product Identifier    | %      | GHS-US classification                                                                                                                                              |
|-----------------------------------|-----------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surfactant blend                  | (CAS-No.) Proprietary | 1 - 10 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Acute 3, H402                                                                      |
| 1,2-Propanediol                   | (CAS-No.) 57-55-6     | 1 - 10 | Not classified                                                                                                                                                     |
| Calcium chloride                  | (CAS-No.) 10043-52-4  | < 1    | Eye Irrit. 2A, H319                                                                                                                                                |
| Subtilisins (proteolytic enzymes) | (CAS-No.) 9014-01-1   | < 1    | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Resp. Sens. 1, H334<br>STOT SE 3, H335<br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411 |

Full text of H-phrases: see section 16

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200].

## 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:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

**First-aid Measures After Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**First-aid Measures After Eye Contact:** Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**First-aid Measures After Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**Symptoms/Injuries:** Causes serious eye damage.

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None known.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>). Sulfur oxides. Nitrogen oxides.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing.

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### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### 6.2. Environmental Precautions

Do not allow uncontrolled discharge of product into the environment. Collect spillage.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray. Do not get in eyes, on skin, or on clothing.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

### 7.3. Specific End Use(s)

Multi-Enzymatic Cleaner for surgical instruments.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

| 1,2-Propanediol (57-55-6)                     |                                       |                           |
|-----------------------------------------------|---------------------------------------|---------------------------|
| USA AIHA                                      | WEEL TWA (mg/m <sup>3</sup> )         | 10 mg/m <sup>3</sup>      |
| Subtilisins (proteolytic enzymes) (9014-01-1) |                                       |                           |
| USA ACGIH                                     | ACGIH Ceiling (mg/m <sup>3</sup> )    | 0.00006 mg/m <sup>3</sup> |
| USA NIOSH                                     | NIOSH REL (STEL) (mg/m <sup>3</sup> ) | 0.00006 mg/m <sup>3</sup> |

### 8.2. Exposure Controls

#### Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

#### Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles.



#### Materials for Protective Clothing

: Chemically resistant materials and fabrics.

#### Hand Protection

: Wear protective gloves.

#### Eye and Face Protection

: Chemical safety goggles.

#### Skin and Body Protection

: Wear suitable protective clothing.

#### Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

#### Other Information

: When using, do not eat, drink or smoke.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on Basic Physical and Chemical Properties

|                                        |                     |
|----------------------------------------|---------------------|
| Physical State                         | : Liquid            |
| Appearance                             | : Amber             |
| Odor                                   | : Characteristic    |
| Odor Threshold                         | : No data available |
| pH                                     | : 7.0 – 8.0         |
| Evaporation Rate                       | : No data available |
| Melting Point                          | : No data available |
| Freezing Point                         | : No data available |
| Boiling Point                          | : > 100 °C (212 °F) |
| 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 |
| Solubility                             | : Water: Soluble    |
| Partition Coefficient: N-Octanol/Water | : No data available |
| Viscosity                              | : No data available |

#### 9.2. Other Information No additional information available

### SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on Toxicological Effects

Acute Toxicity: Not classified

|                                                      |                          |
|------------------------------------------------------|--------------------------|
| <b>Calcium chloride (10043-52-4)</b>                 |                          |
| LD50 Oral Rat                                        | 2301 (1455 - 2781) mg/kg |
| LD50 Dermal Rabbit                                   | > 5000 mg/kg             |
| <b>1,2-Propanediol (57-55-6)</b>                     |                          |
| LD50 Oral Rat                                        | 20 g/kg                  |
| LD50 Dermal Rabbit                                   | 20800 mg/kg              |
| <b>BEROL DR-B1</b>                                   |                          |
| ATE (Oral)                                           | 500.00 mg/kg body weight |
| <b>Subtilisins (proteolytic enzymes) (9014-01-1)</b> |                          |
| LD50 Oral Rat                                        | 3700 mg/kg               |
| ATE (Oral)                                           | 500.00 mg/kg body weight |

Skin Corrosion/Irritation: Not classified

pH: 7.0 - 8.0

Serious Eye Damage/Irritation: Causes serious eye irritation.

pH: 7.0 - 8.0

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

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**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None known.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - General** : Not classified.

|                                                      |                                                                            |
|------------------------------------------------------|----------------------------------------------------------------------------|
| <b>Calcium chloride (10043-52-4)</b>                 |                                                                            |
| LC50 Fish 1                                          | 10650 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])   |
| EC50 Daphnia 1                                       | 2400 mg/l (Exposure time: 48 h - Species: Daphnia magna)                   |
| <b>1,2-Propanediol (57-55-6)</b>                     |                                                                            |
| LC50 Fish 1                                          | 51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])   |
| EC50 Daphnia 1                                       | 10000 mg/l (Exposure time: 24 h - Species: Daphnia magna)                  |
| LC50 Fish 2                                          | 41 - 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| EC50 Daphnia 2                                       | 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])          |
| <b>Subtilisins (proteolytic enzymes) (9014-01-1)</b> |                                                                            |
| LC50 Fish 1                                          | 14.6 mg/l                                                                  |
| EC50 Daphnia 1                                       | 0.306 mg/l                                                                 |
| ErC50 (Algae)                                        | 0.513 (0.513 - 1.48) mg/l                                                  |
| NOEC Chronic Fish                                    | 2 mg/l                                                                     |
| NOEC Chronic Crustacea                               | 0.019 mg/l                                                                 |

### 12.2. Persistence and Degradability

|                               |                  |
|-------------------------------|------------------|
| <b>Pentazyme</b>              |                  |
| Persistence and Degradability | Not established. |

### 12.3. Bioaccumulative Potential

|                                      |                      |
|--------------------------------------|----------------------|
| <b>Pentazyme</b>                     |                      |
| Bioaccumulative Potential            | Not established.     |
| <b>Calcium chloride (10043-52-4)</b> |                      |
| BCF Fish 1                           | (no bioaccumulation) |
| <b>1,2-Propanediol (57-55-6)</b>     |                      |
| BCF Fish 1                           | < 1                  |
| Log Pow                              | -0.92                |

**12.4. Mobility in Soil** No additional information available

### 12.5. Other Adverse Effects

**Other Information** : None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste Treatment Methods

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, and international regulations.

**Ecology - Waste Materials:** Dispose of waste and residues in accordance with local authority requirements.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

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### SECTION 15: REGULATORY INFORMATION

#### 15.1. US Federal Regulations

|                                                                           |                                                                                                                                                                                                     |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pentazyme                                                                 |                                                                                                                                                                                                     |
| SARA Section 311/312 Hazard Classes                                       | Immediate (acute) health hazard                                                                                                                                                                     |
| Calcium chloride (10043-52-4)                                             |                                                                                                                                                                                                     |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |                                                                                                                                                                                                     |
| 1,2-Propanediol (57-55-6)                                                 |                                                                                                                                                                                                     |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |                                                                                                                                                                                                     |
| Subtilisins (proteolytic enzymes) (9014-01-1)                             |                                                                                                                                                                                                     |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |                                                                                                                                                                                                     |
| EPA TSCA Regulatory Flag                                                  | XU - XU - indicates a substance exempt from reporting under the Inventory Update Reporting Rule, i.e, Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(C)). |

#### 15.2. US State Regulations

|                                                            |  |
|------------------------------------------------------------|--|
| 1,2-Propanediol (57-55-6)                                  |  |
| U.S. - New Jersey - Right to Know Hazardous Substance List |  |
| U.S. - Pennsylvania - RTK (Right to Know) List             |  |

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

|                                        |                                                                                                                                      |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Date of Preparation or Latest Revision | : 07/24/2017                                                                                                                         |
| Other Information                      | : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 |

#### GHS Full Text Phrases:

|                     |                                                                           |
|---------------------|---------------------------------------------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4                                          |
| Aquatic Acute 1     | Hazardous to the aquatic environment - Acute Hazard Category 1            |
| Aquatic Acute 3     | Hazardous to the aquatic environment - Acute Hazard Category 3            |
| Aquatic Chronic 2   | Hazardous to the aquatic environment - Chronic Hazard Category 2          |
| Eye Dam. 1          | Serious eye damage/eye irritation Category 1                              |
| Eye Irrit. 2A       | Serious eye damage/eye irritation Category 2A                             |
| Resp. Sens. 1       | Respiratory sensitization, Category 1                                     |
| Skin Irrit. 2       | Skin corrosion/irritation Category 2                                      |
| STOT SE 3           | Specific target organ toxicity (single exposure) Category 3               |
| H302                | Harmful if swallowed                                                      |
| H315                | Causes skin irritation                                                    |
| H318                | Causes serious eye damage                                                 |
| H319                | Causes serious eye irritation                                             |
| H334                | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H335                | May cause respiratory irritation                                          |
| H400                | Very toxic to aquatic life                                                |
| H402                | Harmful to aquatic life                                                   |
| H411                | Toxic to aquatic life with long lasting effects                           |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SDS US (GHS HazCom)