# Material Safety Data Sheet

## Thrombin

Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108  

**Date Created:** 10/23/2007  
**Printed:** 11/02/2007  
**Revision:** 10/23/2007

## 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Code</th>
<th>10010430</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name</td>
<td>Thrombin</td>
</tr>
<tr>
<td>Manufacturer Information</td>
<td></td>
</tr>
<tr>
<td>Company Name</td>
<td>Cayman Chemical Company</td>
</tr>
<tr>
<td>Emergency Contact</td>
<td>Cayman Chemical Company</td>
</tr>
<tr>
<td>Information</td>
<td>Cayman Chemical Company</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>EIA - Other</td>
</tr>
</tbody>
</table>

## 2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Sodium chloride</td>
<td>7647-14-5</td>
<td>0.85 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>3. Potassium phosphate</td>
<td>7778-77-0</td>
<td>0.03 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>4. Sodium phosphate</td>
<td>7758-79-4</td>
<td>0.106 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>5. Thrombin</td>
<td>NA</td>
<td>0.0 -0.1 %</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>RTECS #</th>
<th>OSHA STEL</th>
<th>OSHA CEIL</th>
<th>ACGIH STEL</th>
<th>ACGIH CEIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Water</td>
<td>ZC0110000</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>2. Sodium chloride</td>
<td>V24725000</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>4. Sodium phosphate</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
<tr>
<td>5. Thrombin</td>
<td>NA</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

## 3. Hazards Identification

**Emergency Overview:** No data available.

**Route(s) of Entry:** Inhalation? Yes  Skin? Yes  Eyes? Yes  Ingestion? Yes  Other: Injection

**Potential Health Effects (Acute and Chronic):**  
Material may be irritating to the mucous membranes and upper respiratory tract.  
May be harmful by inhalation, ingestion, or skin absorption.  
May cause eye, skin, or respiratory system irritation.  
The toxicological properties of this compound have not been fully evaluated.

**Signs and Symptoms Of Exposure:** No data available.

## 4. First Aid Measures

**Emergency and First Aid Procedures:**  
If inhaled remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.  
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.  
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water. After initial flushings, remove any contact lenses and continue flushing for at least 20 minutes. Have eyes examined and tested by medical personnel.  
In case of skin contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

## 5. Fire Fighting Measures

**Flash Pt:** No data.  
**Explosive Limits:** LEL: No data.  UEL: No data.
Thrombin

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

Flammable Properties and Hazards: No data available.

Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray when fighting fires involving this material.

Unsuitable Extinguishing Media: No data available.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled: Wear a NIOSH/MSHA approved self-contained breathing apparatus and appropriate personal protective gear (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. After removal, ventilate contaminated area and flush thoroughly with water.

7. Handling and Storage

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Precautions To Be Taken in Handling: Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

Precautions To Be Taken in Storing: Store at correct temperature.

8. Exposure Controls/Personal Protection

Protective Equipment Summary - Hazard Label Information: Eye wash station in work area Lab coat Latex disposable gloves Safety glasses Safety shower in work area Vent Hood

Respiratory Equipment (Specify Type): No data available.

Eye Protection: Safety glasses

Protective Gloves: Latex disposable gloves

Other Protective Clothing: Lab coat

Engineering Controls (Ventilation etc.): Good general ventilation should be sufficient to control airborne levels. Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

Work/Hygienic/Maintenance Practices: 

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Melting Point: No data.

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data. Method: LEL: No data. UEL: No data.

Explosive Limits: 

Specific Gravity (Water = 1): No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Evaporation Rate (vs Butyl Acetate=1): No data.

Solubility in Water: No data.

Percent Volatile: No data.

Corrosion Rate: No data.

pH: No data.
1. Water 7732-18-5 No No No No
2. Sodium chloride 7647-14-5 No No No No
3. Potassium phosphate 7778-77-0 No No No No
4. Sodium phosphate 7758-79-4 No No No No
5. Thrombin NA No No No No

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