

**SECTION 1: PRODUCT IDENTIFICATION**

<b>PRODUCT NAME</b>	<b>THIAMINE HYDROCHLORIDE, USP (Vitamin B1)</b>
<b>PRODUCT CODE</b>	<b>3320</b>
<b>SUPPLIER</b>	<b>MEDISCA Inc.</b> Tel.: 1.800.932.1039   Fax.: 1.855.850.5855 626 Tom Miller Road, Plattsburgh, NY, 12901 <b>MEDISCA Pharmaceutique Inc.</b> Tel.: 1.800.665.6334   Fax.: 514.338.1693 4509 Rue Dobrin, St. Laurent, QC, H4R 2L8 <b>MEDISCA Australia PTY LTD</b> Tel.: 1.300.786.392   Fax.: 61.2.9700.9047 Unit 7, Heritage Business Park 5-9 Ricketty Street, Mascot, NSW 2020
<b>EMERGENCY PHONE</b>	CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 NSW Poisons Information Centre: 131 126 National Chemical Emergency Centre 44(0)1235239670
<b>RECOMMENDED USES</b>	Pharmaceutical Manufacturing
<b>RESTRICTIONS ON USE</b>	Not applicable

**SECTION 2: HAZARDS IDENTIFICATION**

<b>GHS CLASSIFICATION</b>	Acute Toxicity - Oral (Category 5) Acute Aquatic Toxicity (Category 3)
<b>PICTOGRAM</b>	Not Applicable
<b>SIGNAL WORD</b>	Not applicable
<b>HAZARD STATEMENT(S)</b>	May be harmful if swallowed. May cause allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful to aquatic life.
<b>ADVERSE PHYSIOCHEMICAL, HUMAN HEALTH AND ENVIRONMENTAL EFFECTS</b>	Repeated exposure may cause skin dryness or cracking.
<b>PRECAUTIONARY STATEMENT(S)</b>	<b>Prevention</b> Avoid breathing dust, fume, gas, mist, vapors, spray. In case of inadequate ventilation, wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves. Avoid release to the environment.

<b>Response</b>	<p>IF SWALLOWED: Get medical help.</p> <p>IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, get medical help immediately call a poison center or medical professional.</p> <p>IF ON SKIN: Wash with plenty of water. If skin irritation occurs, get medical help. Take off contaminated clothing and wash it before reuse.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical help.</p>			
<b>Storage</b>	Not applicable			
<b>Disposal</b>	Dispose of contents and/or container in accordance with local regulations.			
<b>Health Hazard</b>	1	<b>Flammability</b>	0	
<b>Reactivity</b>	0	<b>Personal Protection</b>	B	

**HMIS CLASSIFICATION**

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<b>CHEMICAL NAME</b>	Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl) methyl]-5-(2-hydroxyethyl)-4-methyl-, chloride, monohydrochloride								
<b>BOTANICAL NAME</b>	Not applicable								
<b>SYNONYM</b>	Vitamin B1 hydrochloride								
<b>CHEMICAL FORMULA</b>	C <sub>12</sub> H <sub>17</sub> ClN <sub>4</sub> OS.HCl								
<b>CHEMICAL FAMILY</b>	Pyrimidine derivative								
<b>CAS NUMBER</b>	67-03-8								
<b>ALTERNATE CAS NUMBER</b>	Not applicable								
<b>MOLECULAR WEIGHT</b>	337.27								
<b>COMPOSITION</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #008000; color: white;"> <th>CHEMICAL NAME</th> <th>CAS NUMBER</th> <th>EC NUMBER</th> <th>% BY WEIGHT</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">THIAMINE HYDROCHLORIDE, USP (Vitamin B1)</td> <td style="text-align: center;">67-03-8</td> <td style="text-align: center;">200-641-8</td> <td style="text-align: center;">100</td> </tr> </tbody> </table>	CHEMICAL NAME	CAS NUMBER	EC NUMBER	% BY WEIGHT	THIAMINE HYDROCHLORIDE, USP (Vitamin B1)	67-03-8	200-641-8	100
CHEMICAL NAME	CAS NUMBER	EC NUMBER	% BY WEIGHT						
THIAMINE HYDROCHLORIDE, USP (Vitamin B1)	67-03-8	200-641-8	100						

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as health hazards and hence require reporting in this section.

### SECTION 4: FIRST-AID MEASURES

<b>IN CASE OF EYE CONTACT</b>	Flush with copious amounts of water for 15 minutes, separating eyelids with fingers. If irritation persists seek medical aid.
<b>IN CASE OF SKIN CONTACT</b>	Wash with soap & water for 15 minutes. If irritation persists seek medical aid.
<b>IF SWALLOWED</b>	Call a physician. Wash out mouth with water. Do not induce vomiting without medical advice.
<b>IF INHALED</b>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician
<b>MEDICAL ATTENTION AND SPECIAL TREATMENT</b>	Get emergency medical help.
<b>SYMPTOMS CAUSED BY EXPOSURE</b>	Not expected to present a significant hazard under anticipated conditions of normal use.

### SECTION 5: FIREFIGHTING MEASURES

**SPECIFIC HAZARDS ARISING FROM THE CHEMICAL**

Not applicable

**FLAMMABLE PROPERTIES**

May be combustible at high temperature

**HAZARDOUS COMBUSTION PRODUCTS**

Under fire conditions, hazardous fumes will be present.

**SUITABLE & UNSUITABLE EXTINGUISHING MEDIA**
**Small fire:** dry chemical, CO<sub>2</sub> or water spray. **Large fire:** dry chemical, CO<sub>2</sub>, alcohol resistant foam or water spray. Do not get water inside containers.

**PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**
**PERSONAL PRECAUTIONS**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**METHODS & MATERIAL FOR CONTAINMENT**

On land, sweep or shovel into suitable containers. Minimize generation of dust.

**CLEANUP PROCEDURE**

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves. Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas. Shut off all sources of ignition. Evacuate the area. If necessary, employ water fog to disperse the vapors. Absorb the matter with compatible vermiculite or other absorbing material. Place in a suitable container and retain for disposal. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

**REFERENCE TO OTHER SECTIONS**

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

**SECTION 7: HANDLING AND STORAGE**
**PRECAUTIONS FOR SAFE HANDLING**

Do not inhale. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

**CONDITIONS FOR SAFE STORAGE**

Store away from incompatible materials, in a well-ventilated area. Eliminate all sources of ignition. Store in accordance with local regulations. Do not store in unlabeled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Use appropriate containment to avoid environmental contamination.

**STORAGE CONDITIONS**

Store in original container, tightly sealed, protected from direct sunlight and moisture.

**SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION**
**Chemical Name: THIAMINE HYDROCHLORIDE, USP (Vitamin B1) CAS #: 67-03-8**

	Country	Limit value-8 hours		Limit value-Short Term		IDLH	REL	Advisory	Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>				
OSHA	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
ACGIH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
NIOSH	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
WEEL	USA	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A

<b>HSIS</b>	Australia	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
<b>HSE</b>	UK	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A
<b>GESTIS</b>	Add Country	N/L	N/L	N/L	N/L	N/L	N/L	N/A	N/A

N/L = Not listed ; N/A = Not Available

PELs are 8-hour TWAs = Limit value - Eight hours

Ceiling or Short-Term TWA = STEL = Limit value - Short term

**EXPOSURE GUIDELINES**

Consult local authorities for provincial or state exposure limits. Particulates not otherwise regulated, respirable fraction: 5 mg/m<sup>3</sup>

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by WHMIS or OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. **Skin:** Wear appropriate gloves to prevent skin exposure. **Clothing:** Wear appropriate protective clothing to minimize contact with skin. **Respirators:** Follow WHMIS or OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. **Thermal Hazards:** For products representing a thermal hazard, appropriate Personal Protective Equipment should be used.

**SPECIFIC ENGINEERING CONTROLS**

Adequate mechanical ventilation. Fumehood, eye wash station, and safety shower.

**BIOLOGICAL MONITORING**

Not available

**CONTROL BANDING**

Not available

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**
**PHYSICAL STATE**

Solid

**DESCRIPTION**

White to almost white powder with slight characteristic odor. Is hygroscopic.

**SOLUBILITY**

Freely soluble in water; soluble in glycerin; slightly soluble in alcohol; practically insoluble in ether, chloroform and acetone.

**ODOR**

Characteristic nut-like odor.

**FLAMMABILITY**

May be combustible at high temperature

**AUTO-IGNITION TEMPERATURE**

Not available

**BOILING POINT**

Not available

**DECOMPOSITION TEMPERATURE**

248 °C, 478.4 °F

**EVAPORATION RATE**

Not available

**EXPLOSIVE LIMIT**

Not available

**FLASH POINT**

Not available

**log P (OCTANOL-WATER)**

< -3.04 (22.5 °C; OECD Test Guideline 107)

**LOWER FLAMMABLE/EXPLOSIVE LIMIT(S)**

Not available

**MELTING/FREEZING POINT**

248 °C, 478.4 °F (decomposes)

**PARTICLE CHARACTERISTICS**

Not available

**OXIDIZING PROPERTY**

Not available

**pH**

2.7 - 3.4 (1% aqueous solution)

**RELATIVE DENSITY (WATER = 1)**

Not available

**SPECIFIC GRAVITY**

1.4 (30 °C)

**UPPER FLAMMABLE/EXPLOSIVE LIMIT(S)**

Not available

**VAPOR DENSITY (AIR = 1)**

11.7

**VAPOR PRESSURE**

< 0.0000001 kPa (25°C)

**VISCOSITY**

Not available

The physical data presented above are typical values and should not be construed as a specification.

**SECTION 10: STABILITY AND REACTIVITY**

<b>REACTIVITY</b>	Not established
<b>CHEMICAL STABILITY</b>	Stable under recommended storage conditions
<b>INCOMPATIBLE MATERIALS</b>	Alkalis. Oxidizing agents. Reducing agents.
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides and other gases may occur
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur
<b>POSSIBILITY OF HAZARDOUS REACTION</b>	Not established
<b>CONDITIONS TO AVOID</b>	Moisture, sunlight and extreme temperatures Hygroscopic-Avoid exposure to moisture

**SECTION 11: TOXICOLOGICAL INFORMATION**

<b>ACUTE TOXICITY</b>	Oral: Rat: LD50: (mg/kg): 3710 Dermal: Rabbit: LD50: (mg/kg): Not available Inhalation: Rat: LC50: (mg/L/4hr): Not available
<b>SKIN CORROSION/IRRITATION</b>	Due to lack of data the classification is not possible. In vitro study, OECD Test Guideline 439: No skin irritation
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	Causes eye irritation. 20 % Bovine eye model; Result: Inconclusive. EpiSkin model Human skin cells: 10 mg; Result: Negative. Reconstructed Human EpiOcular model; Result: Likely irritant at 100% solution. In vitro study, in vitro eye irritation test, Pure substance: Irritating to eyes. In vitro study, OECD Test Guideline 492, 50% solution: No eye irritation. Dust contact with the eyes can lead to mechanical irritation.
<b>RESPIRATORY SENSITIZATION</b>	Based on available data, the classification criteria are not met. Suspected respiratory sensitiser: The Toolbox profiler Respiratory sensitisation gives an alert for respiratory sensitisation.
<b>SKIN SENSITIZATION</b>	Based on available data, the classification criteria are not met. Hypersensitivity reactions have occurred, mainly after parenteral doses. These reactions have ranged in severity from very mild to, very rarely, fatal anaphylactic shock. Organ: Skin; In vitro Cell Line Activation test; Result: Negative. Organ: Skin; In vitro Direct Peptide Reactivity Assay; Result: Low skin sensitizer. In vitro Luciferase Test method; Result: Negative.
<b>GERM CELL MUTAGENICITY</b>	Based on available data, the classification criteria are not met. Suspected mutagen: The Toolbox profiler in vitro mutagenicity (Ames test) alerts by ISS gives an alert for mutagenicity Ames test (Salmonella typhimurium); Result: Negative.
<b>CARCINOGENICITY</b>	<b>OSHA</b> THIAMINE HYDROCHLORIDE is not listed. <b>NTP</b> THIAMINE HYDROCHLORIDE is not listed. <b>IARC</b> THIAMINE HYDROCHLORIDE is not evaluated. <b>California Proposition 65</b> This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.
<b>ADDITIONAL CARCINOGENICITY INFORMATION</b>	Based on available data, the classification criteria are not met. Suspected carcinogen: The Toolbox profiler Carcinogenicity (genotox and nongenotox) alerts by ISS gives an alert for carcinogenicity
<b>REPRODUCTIVE TOXICITY</b>	Based on available data, the classification criteria are not met.

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE**

Due to lack of data the classification is not possible.

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE**

Due to lack of data the classification is not possible.

No observed adverse effect level (Oral, Rat) : >= 1000 mg/kg bw/d Subacute toxicity study (28 days) (OECD Test Guideline 422)

**ASPIRATION HAZARDS**

Based on available data, the classification criteria are not met.

**SIGNS AND SYMPTOMS OF EXPOSURE**
**ROUTES OF EXPOSURE:**

Oral, Dermal, Inhalation, Eye contact

**EARLY ONSET SYMPTOMS RELATED TO EXPOSURE:**

Experience with human exposure:

Cases of anaphylactic shock after parenteral application of Thiamin have been recorded. RDA (Recommended Daily Allowance) ca. 1.2 mg

**DELAYED HEALTH EFFECT FROM EXPOSURE:**

Not available

Not expected to present a significant hazard under anticipated conditions of normal use.

**POTENTIAL HEALTH EFFECTS**

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation. May cause allergic reaction
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation. May cause allergic reaction
<b>Eyes</b>	Causes serious eye irritation.

## SECTION 12: ECOLOGICAL INFORMATION

**ECOTOXICITY**

EC50: 48 Hr: Crustacea (Daphnia magna (Water flea)): (mg/L): > 100\*  
 LC50: 96 Hr: Fish (Oncorhynchus mykiss (rainbow trout)): (mg/L): > 100\*\*  
 EC50: 72 Hr: Algae(Desmodesmus subspicatus (green algae)): (mg/L): > 100\*\*\*

**PERSISTENCE AND DEGRADABILITY**

Suspected persistent in the environment: The Danish QSAR database contains information indicating that the substance is predicted as non readily biodegradable  
 74 % (7 d) (OECD Test Guideline 302B) Well inherently biodegradable  
 100 % (28 d) (OECD Test Guideline 301B) Readily biodegradable

**BIOACCUMULATIVE POTENTIAL**

log Pow: < -3.04 (22.5 °C; OECD Test Guideline 107)

**MOBILITY IN SOIL**

Water: 500 g/l (20 °C, pH 2.1; OECD Test Guideline 105): easily soluble.

**OTHER ADVERSE EFFECTS**

Harmful to aquatic life.

Ozone-Depletion Potential: Regulation: 40 CFR Protection of Environment; Part 82 Pro-tection of Stratospheric Ozone - CAA Section 602 Class I Substances; Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product is not intended to be released into the environment

**NOTES**

\*OECD Test Guideline 202  
 \*\*OECD Test Guideline 203  
 \*\*\*OECD Test Guideline 201

## SECTION 13: DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS**

Dispose of in accordance with federal / local laws and regulations. Avoid release into the environment.

## SECTION 14: TRANSPORT INFORMATION

**UN PROPER SHIPPING NAME** Not dangerous good  
**UN NUMBER** Not applicable  
**CLASS** Not applicable  
**PACKING GROUP** Not applicable

**AUSTRALIA**

**HAZCHEM** Not applicable

**EU**

**TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE** Not Listed

**ENVIRONMENTAL HAZARDS** Not available

**SPECIAL SHIPPING INFORMATION** Not applicable

**SECTION 15: REGULATORY INFORMATION**
**UNITED STATES REGULATIONS**

Chemical Name & CAS	CERCLA 40 CFR Part 302.4	SARA (Title III) 40 CFR Part 372.65	EPA 40 CFR Part 355		Pennsylvania	Right-to-know		California Prop 65
			Appendix A	Appendix B		New Jersey	Massachusetts	
THIAMINE HYDROCHLORIDE 67-03-8	N/L	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

**AUSTRALIAN REGULATIONS**

Chemical Name & CAS	Poisons and Therapeutic Goods	Therapeutic Goods Act	Code of Practices - Illicit Drug Precursors	Poisons Standard	Work Health and Safety Regulations	Inventory of Industrial Chemicals
THIAMINE HYDROCHLORIDE 67-03-8	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed

**EU REGULATIONS**

Chemical Name & CAS	REACH ANNEX XVII	REACH ANNEX XIV	EC 1005/2009	EC 850/2004	EC 1107/2009	PIC - Prior Informed Consent Regulation	EC 2012/18
THIAMINE HYDROCHLORIDE 67-03-8	N/L	N/L	N/L	N/L	N/L	N/L	N/L

N/L = Not Listed; X = Listed

Any EU regulation not listed above is not applicable to this product.

**SUBJECT TO INTERNATIONAL AGREEMENT** Not applicable

**SECTION 16: OTHER INFORMATION**

## REFERENCES

Available upon request

## ABBREVIATIONS AND ACRONYMS

**ACGIH** - American Conference of Governmental Industrial Hygienists; **AIHA WEEL** – American Industrial Hygiene Association Workplace Environment Exposure Levels; **CAESAR** – Computer Assisted Evaluation of industrial chemical Substances According to Regulations; **CAS** – Chemical Abstract Service; **CERCLA** – Comprehensive Environmental Response, Compensation, and Liability Act; **EC50** – Effective Concentration, 50%; **EPA** – Environmental Protection Agency; **GHS** – Global Harmonized System; **HMIS** – Hazardous Materials Information System; **HSE** – Health and Safety Executive; **HSIS** – Hazardous Substances Information System; **IARC** – International Agency for Research on Cancer; **IDLH** - Immediately Dangerous to Life or Health; **IRFMN** – Ready Biodegradability Model; **ISS** – Istituto Superiore Sanità; **LC50** – Lethal Concentration, 50%; **LD50** – Lethal Dose, 50%; **MSHA** - Mine Safety and Health Administration; **NIOSH** – National Institute for Occupational Safety and Health; **NTP** – National Toxicology Program; **OSHA PEL** – Occupational Safety & Health Administration Permissible Exposure Limits; **QSAR** – Quantitative Structure-activity relationship; **REL** - Recommended Exposure Limit; **SARA** – Superfund Amendments and Reauthorization Act; **STEL** – Short Term Exposure Limit; **TLV** – Threshold Limit Value; **TWA** – Time Weighted Average; **WHMIS** – Workplace Hazardous Materials Information System

## LAST REVISION

06/2025

## SUPERSEDES

01/2025

For a list of changes to the SDS since the last version, please communicate with MEDISCA at [www.medisca.com](http://www.medisca.com)

## DISCLAIMER

This document was created in accordance with OSHA, Safe Work Australia and WHMIS regulations. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MEDISCA® shall not be held liable for any damage resulting from handling or from contact with the above product. Recipients of the product must take responsibility for observing existing laws and regulations.

## SUPPLEMENTARY INFORMATION

For all country specific requirements not outlined on this Safety Data Sheet, please request Supplementary Page to this Safety Data Sheet.