



# Material Safety Data Sheet

Material Name: Vitamin B Complex

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

### Manufacturer Information

Bioniche Pharma  
272 E Deerpath Road  
Suite 304  
Lake Forest, IL 60045

Phone: 888-258-4199

Emergency # 888-875-1671

## \*\*\* Section 2 - Hazards Identification \*\*\*

### Emergency Overview

May cause eye, skin, gastrointestinal, and/or respiratory tract irritation.

### Potential Health Effects: Eyes

May cause irritation.

### Potential Health Effects: Skin

May cause irritation.

### Potential Health Effects: Ingestion

Not considered a likely route of exposure under normal product use. May cause gastrointestinal irritation if swallowed.

### Potential Health Effects: Inhalation

Not considered a likely route of exposure under normal product use. May cause respiratory tract irritation.

### HMIS Ratings: Health: 1 Fire: 0 HMIS Reactivity 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component
7732-18-5	Water
98-92-0	Nicotinamide
67-03-8	Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride
100-51-6	Benzyl alcohol
7647-01-0	Hydrogen chloride
1310-73-2	Sodium hydroxide
81-13-0	Butanamide, 2,4-dihydroxy-N-(3-hydroxypropyl)-3,3-dimethyl-, (R)-
58-56-0	3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride
130-40-5	Riboflavin 5'-(dihydrogen phosphate), monosodium salt

## \*\*\* Section 4 - First Aid Measures \*\*\*

### First Aid: Eyes

Flush immediately with water for at least 15 minutes. Do not rub eyes.

### First Aid: Skin

For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

### First Aid: Ingestion

If ingestion of a large amount does occur, seek medical attention.

### First Aid: Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration.

# Material Safety Data Sheet

Material Name: Vitamin B Complex

## \*\*\* Section 5 - Fire Fighting Measures \*\*\*

### General Fire Hazards

See Section 9 for Flammability Properties.

None

### Hazardous Combustion Products

Not determined

### Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

### Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

**NFPA Ratings: Health: 1 Fire: 0 Reactivity: 0**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

## \*\*\* Section 6 - Accidental Release Measures \*\*\*

### Containment Procedures

Contain the discharged material.

### Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Use sand or perlite or vermiculite as an absorbent for large spills of this material.

### Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

### Special Procedures

Avoid contact with skin and eyes.

## \*\*\* Section 7 - Handling and Storage \*\*\*

### Handling Procedures

Wash hands after handling and before eating.

### Storage Procedures

Keep this material in a cool, well-ventilated place.

## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### A: Component Exposure Limits

#### Sodium hydroxide (1310-73-2)

ACGIH: 2 mg/m3 Ceiling

OSHA: 2 mg/m3 Ceiling

NIOSH: 2 mg/m3 Ceiling

#### Hydrogen chloride (7647-01-0)

ACGIH: 2 ppm Ceiling

OSHA: 5 ppm Ceiling; 7 mg/m3 Ceiling

NIOSH: 5 ppm Ceiling; 7 mg/m3 Ceiling

### Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

### PERSONAL PROTECTIVE EQUIPMENT

#### Personal Protective Equipment: Eyes/Face

Wear safety glasses; chemical goggles (if splashing is possible).

#### Personal Protective Equipment: Skin

Use impervious gloves.

#### Personal Protective Equipment: Respiratory

Not normally needed.

#### Personal Protective Equipment: General

Eye wash fountain is recommended.

# Material Safety Data Sheet

Material Name: Vitamin B Complex

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Appearance:</b>	Clear	<b>Odor:</b>	None
<b>Physical State:</b>	Liquid	<b>pH:</b>	ND
<b>Vapor Pressure:</b>	ND	<b>Vapor Density:</b>	ND
<b>Boiling Point:</b>	ND	<b>Melting Point:</b>	ND
<b>Solubility (H2O):</b>	Slight	<b>Specific Gravity:</b>	ND
<b>Evaporation Rate:</b>	ND	<b>VOC:</b>	ND
<b>Octanol/H2O Coeff.:</b>	ND	<b>Flash Point:</b>	ND
<b>Flash Point Method:</b>	ND	<b>Upper Flammability Limit (UFL):</b>	ND
<b>Lower Flammability Limit (LFL):</b>	ND	<b>Burning Rate:</b>	ND
<b>Auto Ignition:</b>	ND		

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

This is a stable material.

### Chemical Stability: Conditions to Avoid

None

### Incompatibility

Not Determined

### Hazardous Decomposition

Not Determined

### Possibility of Hazardous Reactions

Will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Dose Effects

#### A: General Product Information

No information available for the product.

#### B: Component Analysis - LD50/LC50

##### Water (7732-18-5)

Oral LD50 Rat: >90 mL/kg

##### Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (67-03-8)

Oral LD50 Rat: 3710 mg/kg

##### Nicotinamide (98-92-0)

Oral LD50 Rat: 3500 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

##### Benzyl alcohol (100-51-6)

Inhalation LC50 Rat: 8.8 mg/L/4H; Oral LD50 Rat:1230 mg/kg; Dermal LD50 Rabbit:2000 mg/kg

##### Sodium hydroxide (1310-73-2)

Dermal LD50 Rabbit: 1350 mg/kg

##### Hydrogen chloride (7647-01-0)

Inhalation LC50 Rat: 3124 ppm/1H; Oral LD50 Rat:700 mg/kg; Dermal LD50 Rabbit:>5010 mg/kg

##### Butanamide, 2,4-dihydroxy-N-(3-hydroxypropyl)-3,3-dimethyl-, (R)- (81-13-0)

Oral LD50 Mouse: 15 g/kg

##### 3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (58-56-0)

# Material Safety Data Sheet

**Material Name: Vitamin B Complex**

Oral LD50 Rat: 4 g/kg

## Carcinogenicity

### A: General Product Information

No information available for the product.

### B: Component Carcinogenicity

#### Hydrogen chloride (7647-01-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 54 [1992] (Group 3 (not classifiable))

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity

#### A: General Product Information

No information available for the product.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

##### Nicotinamide (98-92-0)

###### Test & Species

96 Hr LC50 Poecilia reticulata	>1000 mg/L [static]
24 Hr EC50 Daphnia magna	>1000 mg/L

###### Conditions

##### Benzyl alcohol (100-51-6)

###### Test & Species

96 Hr LC50 Pimephales promelas	460 mg/L [static]
96 Hr LC50 Lepomis macrochirus	10 mg/L [static]
3 Hr EC50 Anabaena variabilis	35 mg/L
5 min EC50 Photobacterium phosphoreum	63.7 mg/L
15 min EC50 Photobacterium phosphoreum	63.7 mg/L
30 min EC50 Photobacterium phosphoreum	71.4 mg/L
5 min EC50 Photobacterium phosphoreum	50 mg/L
48 Hr EC50 water flea	23 mg/L

###### Conditions

##### Sodium hydroxide (1310-73-2)

###### Test & Species

96 Hr LC50 Oncorhynchus mykiss	45.4 mg/L [static]
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###### Conditions

##### Hydrogen chloride (7647-01-0)

###### Test & Species

48 Hr LC50 Lepomis macrochirus	3.6 mg/L
96 Hr LC50 Gambusia affinis	282 mg/L

###### Conditions

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### US EPA Waste Number & Descriptions

#### Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

#### Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations.

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

# Material Safety Data Sheet

Material Name: Vitamin B Complex

## \*\*\* Section 14 - Transportation Information \*\*\*

### US DOT Information

Shipping Name: Not Regulated

## \*\*\* Section 15 - Regulatory Information \*\*\*

### US Federal Regulations

#### Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

##### **Sodium hydroxide (1310-73-2)**

CERCLA: 1000 lb final RQ; 454 kg final RQ

##### **Hydrogen chloride (7647-01-0)**

SARA 302: 500 lb TPQ (gas only)

SARA 313: 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

### State Regulations

#### Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Benzyl alcohol	100-51-6	No	Yes	Yes	No	Yes	No
Sodium hydroxide	1310-73-2	Yes	Yes	Yes	Yes	Yes	Yes
Hydrogen chloride	7647-01-0	Yes	Yes	Yes	Yes	Yes	Yes

#### Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Benzyl alcohol	100-51-6	1 %
Sodium hydroxide	1310-73-2	1 %
Hydrogen chloride	7647-01-0	1 %

### Additional Regulatory Information

# Material Safety Data Sheet

Material Name: Vitamin B Complex

## Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Water	7732-18-5	Yes	DSL	EINECS
Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl-chloride, monohydrochloride	67-03-8	Yes	DSL	EINECS
Nicotinamide	98-92-0	Yes	DSL	EINECS
Benzyl alcohol	100-51-6	Yes	DSL	EINECS
Sodium hydroxide	1310-73-2	Yes	DSL	EINECS
Hydrogen chloride	7647-01-0	Yes	DSL	EINECS
Riboflavin 5'-(dihydrogen phosphate), monosodium salt	130-40-5	Yes	DSL	EINECS
Butanamide, 2,4-dihydroxy-N-(3-hydroxypropyl)-3,3-dimethyl-, (R)-	81-13-0	Yes	DSL	EINECS
3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride	58-56-0	Yes	DSL	EINECS

## \*\*\* Section 16 - Other Information \*\*\*

### Other Information

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

### Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.