VITA

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015

Date of issue: 2016-09-13 Revision date: 2016-09-13 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product name : VITA

Product code : Not available

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

Use of the substance/mixture : Multi-vitamin Reference Material, for laboratory use only

1.3. Details of the supplier of the safety data sheet

National Research Council Canada
1200 Montreal Road
Ottawa, K1A 0R6 - Canada
T 613-993-2359

National Research Council Canada | Conseil national de recherches Canada

1.4. Emergency telephone number

Emergency number : CANUTEC 1-613-996-6666

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS classification

Not classified.

2.2. Label elements

GHS labelling

No labelling applicable

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Lactose, monohydrate	(CAS No) 64044-51-5	53.56
Cellulose	(CAS No) 9004-34-6	14.83
Phosphoric acid, calcium salt	(CAS No) 7757-93-9	6.80
Hydroxypropyl ether of cellulose	(CAS No) 9004-64-2	2.97
Croscarmellose sodium	(CAS No) 74811-65-7	2.97
Magnesium oxide (MgO)	(CAS No) 1309-48-4	2.67
L-Ascorbic acid	(CAS No) 50-81-7	1.78
Tripotassium citrate monohydrate	(CAS No) 6100-05-6	1.78
Magnesium stearate	(CAS No) 557-04-0	1.48
Silica, amorphous, fumed, crystalline-free	(CAS No) 112945-52-5	0.89
Carbonic acid, calcium salt (1:1)	(CAS No) 471-34-1	0.61
Nicotinamide	(CAS No) 98-92-0	0.59

2-Butenedioic acid (E)-, iron(2+) salt (1:1)	(CAS No) 141-01-5	0.53
Zinc oxide	(CAS No) 1314-13-2	0.36
N-(2,4-Dihydroxy-3,3-dimethyl-1-oxobutyl)-.beta.-alanine, calcium salt (2:1), (R)-	(CAS No) 137-08-6	0.30
Vitamin E acetate	(CAS No) 58-95-7	0.30
2,5-Cyclohexadiene-1,4-dione, 2-(3,7,11,15,19,23,27,31,35,39-decamethyl-2,6,10,14,18,22,26,30,34,38-tetracontadecaenyl)-5,6-dimethoxy-3-methyl-, (all-E)-	(CAS No) 303-98-0	0.21
3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride	(CAS No) 58-56-0	0.059
Manganese(II) sulfate	(CAS No) 7785-87-7	0.059
Riboflavin	(CAS No) 83-88-5	0.050
Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride	(CAS No) 67-03-8	0.044
.psi.,.psi.-Carotene	(CAS No) 502-65-8	0.044
Retinol, acetate	(CAS No) 127-47-9	0.018
Copper oxide (CuO)	(CAS No) 1317-38-0	0.015
L-Glutamic acid, N-[4-[[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino] benzoyl]-	(CAS No) 59-30-3	0.012
.beta.,.beta.-Carotene	(CAS No) 7235-40-7	0.0089
.beta.,.epsilon.-Carotene-3,3'-diol, (3R,3'R,6'R)-	(CAS No) 127-40-2	0.0089
Boron from Boron Citrate	(CAS No) 74231-02-0	0.0059
Potassium iodide (KI)	(CAS No) 7681-11-0	0.0044
Chromium picolinate	(CAS No) 14639-25-9	0.0015
1H-Thieno[3,4-d]imidazole-4-pentanoic acid, hexahydro-2-oxo-, [3aS-(3a.alpha.,4.beta.,6a.alpha.)]-	(CAS No) 58-85-5	0.0012
Phylloquinone	(CAS No) 84-80-0	0.00089
Ergocalciferol	(CAS No) 50-14-6	0.00030
Vitamin B12	(CAS No) 68-19-9	0.00018

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Treat for surrounding material.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon.

5.3. Advice for firefighters

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.

Hygiene measures : Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Lactose, monohydrate (64044-51-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Cellulose (9004-34-6)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
IDLH	Not applicable	
NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

Phosphoric acid, calcium salt (7757-93-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Hydroxypropyl ether of cellulose (9004-64-2)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Croscarmellose sodium (74811-65-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Magnesium oxide (MgO) (1309-48-4)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ (inhalable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (fume, total particulate)
IDLH	US IDLH (mg/m³)	750 mg/m³ (fume)
NIOSH	Not applicable	

L-Ascorbic acid (50-81-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Tripotassium citrate monohydrate (6100-05-6)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Magnesium stearate (557-04-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
ACGIH	Not applicable

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Carbonic acid, calcium salt (1:1) (471-34-1)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Nicotinamide (98-92-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

2-Butenedioic acid (E)-, iron(2+) salt (1:1) (141-01-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Zinc oxide (1314-13-2)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³ (respirable fraction)
ACGIH	ACGIH STEL (mg/m³)	10 mg/m³ (respirable fraction)
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³ (fume) 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
IDLH	US IDLH (mg/m³)	500 mg/m³
NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³ (dust and fume)
NIOSH	NIOSH REL (STEL) (mg/m³)	10 mg/m³ (fume)
NIOSH	NIOSH REL (ceiling) (mg/m³)	15 mg/m³ (dust)

N-(2,4-Dihydroxy-3,3-dimethyl-1-oxobutyl)-.beta.-alanine, calcium salt (2:1), (R)- (137-08-6)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Vitamin E acetate (58-95-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable

Vitamin E acetate (58-95-7)	
NIOSH	Not applicable

2,5-Cyclohexadiene-1,4-dione, 2-(3,7,11,15,19,23,27,31,35,39-decamethyl-2,6,10,14,18,22,26,30,34,38-tetracontadecaenyl)-5,6-dimethoxy-3-methyl-, (all-E)- (303-98-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (58-56-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Manganese(II) sulfate (7785-87-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Riboflavin (83-88-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (67-03-8)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

.psi.,.psi.-Carotene (502-65-8)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Retinol, acetate (127-47-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable

Retinol, acetate (127-47-9)	
NIOSH	Not applicable

Copper oxide (CuO) (1317-38-0)		
ACGIH	Not applicable	
OSHA	Not applicable	
IDLH	Not applicable	
NIOSH	NIOSH REL (TWA) (mg/m³)	0,1 mg/m³ (fume)

L-Glutamic acid, N-[4-[[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]- (59-30-3)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

.beta.,.beta.-Carotene (7235-40-7)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

.beta.,.epsilon.-Carotene-3,3'-diol, (3R,3'R,6'R)- (127-40-2)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Boron from boron citrate (74231-02-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Potassium iodide (KI) (7681-11-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Chromium picolinate (14639-25-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

1H-Thieno[3,4-d]imidazole-4-pentanoic acid, hexahydro-2-oxo-, [3aS-(3a.alpha.,4.beta.,6a.alpha.)]- (58-85-5)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Phylloquinone (84-80-0)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Ergocalciferol (50-14-6)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

Vitamin B12 (68-19-9)	
ACGIH	Not applicable
OSHA	Not applicable
IDLH	Not applicable
NIOSH	Not applicable

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Hand protection : Wear suitable gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Powder

Colour : White

Odour : No data available

Odour threshold : No data available

pH : 5.7

Melting point : No data available

Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Not flammable
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	No data available
Relative density	:	No data available
Relative vapour density at 20 °C	:	No data available
Solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified.

VITA	
LD50 oral rat	> 2000 mg/kg (Calculated acute toxicity estimate)
LD50 dermal rabbit	> 2000 mg/kg (Calculated acute toxicity estimate)
LC50 inhalation rat	> 20 mg/l/4h (Calculated acute toxicity estimate)

Cellulose (9004-34-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat	> 5800 mg/m³/4h
Phosphoric acid, calcium salt (7757-93-9)	
LD50 oral rat	10000 mg/kg
LD50 dermal rabbit	> 7940 mg/kg
Hydroxypropyl ether of cellulose (9004-64-2)	
LD50 oral rat	10200 mg/kg
L-Ascorbic acid (50-81-7)	
LD50 oral rat	11900 mg/kg
Silica, amorphous, fumed, crystalline-free (112945-52-5)	
LD50 oral rat	3160 mg/kg
Carbonic acid, calcium salt (1:1) (471-34-1)	
LD50 oral rat	6450 mg/kg
Nicotinamide (98-92-0)	
LD50 oral rat	3500 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
2-Butenedioic acid (E)-, iron(2+) salt (1:1) (141-01-5)	
LD50 oral rat	3850 mg/kg
Zinc oxide (1314-13-2)	
LD50 oral rat	> 5000 mg/kg
N-(2,4-Dihydroxy-3,3-dimethyl-1-oxobutyl)-.beta.-alanine, calcium salt (2:1), (R)- (137-08-6)	
LD50 oral rat	> 10 g/kg
3,4-Pyridinedimethanol, 5-hydroxy-6-methyl-, hydrochloride (58-56-0)	
LD50 oral rat	4000 mg/kg
Manganese(II) sulfate (7785-87-7)	
LD50 oral rat	782 mg/kg
Riboflavin (83-88-5)	
LD50 oral rat	> 10 g/kg
Thiazolium, 3-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-5-(2-hydroxyethyl)-4-methyl- chloride, monohydrochloride (67-03-8)	
LD50 oral rat	3710 mg/kg
Retinol, acetate (127-47-9)	
LD50 oral rat	4980 mg/kg
Phylloquinone (84-80-0)	
LD50 oral rat	> 33487 mg/kg
Ergocalciferol (50-14-6)	
LD50 oral rat	10 mg/kg

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

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

Silica, amorphous, fumed, crystalline-free (112945-52-5)	
IARC group	3 - Not classifiable

Phylloquinone (84-80-0)	
IARC group	3 - Not classifiable

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

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

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

Symptoms/injuries after inhalation : May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

VITA	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

VITA	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

SECTION 14: Transport information

Department of Transportation (DOT) and Transport of Dangerous Goods (TDG)

In accordance with DOT and TDG

Not regulated for transport

Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Lactose, monohydrate	CAS No 64044-51-5
Croscarmellose sodium	CAS No 74811-65-7
Tripotassium citrate monohydrate	CAS No 6100-05-6
Silica, amorphous, fumed, crystalline-free	CAS No 112945-52-5
.psi.,.psi.-Carotene	CAS No 502-65-8
Chromium picolinate	CAS No 14639-25-9

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories except for:

Lactose, monohydrate	CAS No 64044-51-5
Croscarmellose sodium	CAS No 74811-65-7
Tripotassium citrate monohydrate	CAS No 6100-05-6
Chromium picolinate	CAS No 14639-25-9

Ergocalciferol (50-14-6)	
Listed on the United States SARA Section 302	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 - 10000 lb

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue : 2016-09-13
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Version # : 1.0
Prepared by : Nexreg Compliance Inc.

DISCLAIMER:
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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