

## Multivitamin (with Soy Oil) Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2020/10/10
3.0	2021/06/24	4257971-00007	Date of first issue: 2019/05/06

### 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Multivitamin (with Soy Oil) Formulation

#### Supplier's company name, address and phone number

Company name of supplier : MSD

Address : Kumagaya, Saitama Prefecture , Xicheng 810 MSD Co., Ltd.  
Menuuma factory

Telephone : 048-588-8411

E-mail address : EHSDATASTEWARD@msd.com

Emergency telephone number : +1-908-423-6000

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

### 2. HAZARDS IDENTIFICATION

#### GHS classification of chemical product

Reproductive toxicity : Category 1A

Specific target organ toxicity -  
repeated exposure : Category 1 (Liver)

#### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H360D May damage the unborn child.  
H372 Causes damage to organs (Liver) through prolonged or  
repeated exposure.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read  
and understood.  
P260 Do not breathe mist or vapours.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ protective clothing/ eye protec-  
tion/ face protection.  
**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/

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attention.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards which do not result in classification**

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Vitamin A Palmitate	79-81-2	>= 20 - < 25	8-509, 9-1656
(dl)-a-Tocopheryl acetate	7695-91-2	>= 1 - < 10	9-487
Colecalciferol	67-97-0	>= 0.1 - < 0.25	9-1054

### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.  
 Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
 Remove contaminated clothing and shoes.  
 Get medical attention.  
 Wash clothing before reuse.  
 Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.  
 Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.  
 Get medical attention.  
 Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : May damage the unborn child.  
 Causes damage to organs through prolonged or repeated exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

### 5. FIREFIGHTING MEASURES

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- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
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### 7. HANDLING AND STORAGE

#### Handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

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- Advice on safe handling** : Do not get on skin or clothing.  
 Do not breathe mist or vapours.  
 Do not swallow.  
 Avoid contact with eyes.  
 Wash skin thoroughly after handling.  
 Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
 Keep container tightly closed.  
 Do not eat, drink or smoke when using this product.  
 Take care to prevent spills, waste and minimize release to the environment.
- Avoidance of contact** : Oxidizing agents
- Hygiene measures** : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
 When using do not eat, drink or smoke.  
 Wash contaminated clothing before re-use.

### Storage

- Conditions for safe storage** : Keep in properly labelled containers.  
 Store locked up.  
 Keep tightly closed.  
 Store in accordance with the particular national regulations.
- Materials to avoid** : Do not store with the following product types:  
 Oxidizing solids  
 Oxidizing liquids
- Packaging material** : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Vitamin A Palmitate	79-81-2	TWA	>= 1 < 10 ug/m <sup>3</sup> (OEB 4)	Internal
(dl)-a-Tocopheryl acetate	7695-91-2	TWA	5000 ug/m <sup>3</sup> (OEB 1)	Internal
Colecalciferol	67-97-0	TWA	5 µg/m <sup>3</sup> (OEB 4)	Internal
		Wipe limit	50 µg/100 cm <sup>2</sup>	Internal

- Engineering measures** : Minimize workplace exposure concentrations.  
 If sufficient ventilation is unavailable, use with local exhaust ventilation.

### Personal protective equipment

- Respiratory protection** : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- Filter type** : Organic vapour type
- Hand protection**

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	Material	:	Chemical-resistant gloves
	Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
	Eye protection	:	Wear the following personal protective equipment: Safety glasses
	Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	Aqueous solution
Colour	:	yellow
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/freezing point	:	-5 °C
Boiling point, initial boiling point and boiling range	:	194 °C
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	Not applicable
Lower explosion limit and upper explosion limit / flammability limit		
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	244 °C
Decomposition temperature	:	No data available
pH	:	No data available
Evaporation rate	:	No data available
Auto-ignition temperature	:	No data available

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Viscosity  
Viscosity, dynamic : 68.41 - 68.81 mPa.s (25 °C)  
Method: Brookfield

Viscosity, kinematic : No data available

Solubility(ies)  
Water solubility : practically insoluble

Solubility in other solvents : slightly soluble  
Solvent: Ethanol

Partition coefficient: n-octanol/water : Not applicable

Vapour pressure : No data available

Density and / or relative density  
Relative density : 0.9 - 0.94

Density : No data available

Relative vapour density : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle characteristics  
Particle size : Not applicable

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**10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.  
Chemical stability : Stable under normal conditions.  
Possibility of hazardous reactions : Can react with strong oxidizing agents.  
Conditions to avoid : None known.  
Incompatible materials : Oxidizing agents  
Hazardous decomposition products : No hazardous decomposition products are known.

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**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

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### Acute toxicity

|| Not classified based on available information.

#### Product:

|| Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg  
 Method: Calculation method

|| Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: Calculation method

|| Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg  
 Method: Calculation method

#### Components:

##### **Vitamin A Palmitate:**

|| Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
 Remarks: Based on data from similar materials

##### **(dl)-a-Tocopheryl acetate:**

|| Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

|| Acute dermal toxicity : LD50 (Rat): > 3,000 mg/kg  
 Assessment: The substance or mixture has no acute dermal toxicity

##### **Colecalciferol:**

|| Acute oral toxicity : LD50 (Rat, male): 35 mg/kg

|| Acute inhalation toxicity : Acute toxicity estimate: 0.05 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: Expert judgement

|| Acute dermal toxicity : Acute toxicity estimate: 50 mg/kg  
 Method: Expert judgement

### Skin corrosion/irritation

|| Not classified based on available information.

#### Components:

##### **Vitamin A Palmitate:**

|| Species : Rabbit  
 || Method : OECD Test Guideline 404  
 || Result : Mild skin irritation

##### **(dl)-a-Tocopheryl acetate:**

|| Species : Rabbit  
 || Method : OECD Test Guideline 404

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|||Result : No skin irritation

### Serious eye damage/eye irritation

||| Not classified based on available information.

#### Components:

##### ||| Vitamin A Palmitate:

|||Species : Rabbit  
 |||Result : No eye irritation  
 |||Method : OECD Test Guideline 405

##### ||| (dl)-a-Tocopheryl acetate:

|||Species : Rabbit  
 |||Result : No eye irritation  
 |||Method : OECD Test Guideline 405

##### ||| Colecalciferol:

|||Species : Rabbit  
 |||Result : No eye irritation

### Respiratory or skin sensitisation

#### Skin sensitisation

||| Not classified based on available information.

#### Respiratory sensitisation

||| Not classified based on available information.

#### Components:

##### ||| Vitamin A Palmitate:

|||Test Type : Maximisation Test  
 |||Exposure routes : Skin contact  
 |||Species : Guinea pig  
 |||Method : OECD Test Guideline 406  
 |||Result : negative

##### ||| (dl)-a-Tocopheryl acetate:

|||Test Type : Draize Test  
 |||Exposure routes : Skin contact  
 |||Species : Humans  
 |||Result : negative

##### ||| Colecalciferol:

|||Test Type : Maurer optimisation test  
 |||Exposure routes : Skin contact  
 |||Species : Guinea pig  
 |||Result : negative



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### Germ cell mutagenicity

|| Not classified based on available information.

#### Components:

##### **Vitamin A Palmitate:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cyto-genetic assay)  
 Species: Mouse  
 Application Route: Ingestion  
 Method: OECD Test Guideline 474  
 Result: negative

##### **(dl)-a-Tocopheryl acetate:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
 Method: OECD Test Guideline 473  
 Result: negative

Test Type: Bacterial reverse mutation assay (AMES)  
 Method: OECD Test Guideline 471  
 Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cyto-genetic assay)  
 Species: Mouse  
 Application Route: Ingestion  
 Result: negative

##### **Colecalciferol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
 Method: OECD Test Guideline 471  
 Result: equivocal

Test Type: In vitro mammalian cell gene mutation test  
 Method: OECD Test Guideline 476  
 Result: negative

Test Type: Chromosome aberration test in vitro  
 Method: OECD Test Guideline 473  
 Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cyto-genetic assay)  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 474  
 Result: negative

Test Type: In vivo mammalian alkaline comet assay  
 Species: Rat  
 Application Route: Ingestion

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Result: positive  
 Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

### Carcinogenicity

Not classified based on available information.

### Components:

#### (dl)-a-Tocopheryl acetate:

Species : Rat  
 Application Route : Ingestion  
 Exposure time : 104 weeks  
 Result : negative

### Reproductive toxicity

May damage the unborn child.

### Components:

#### Vitamin A Palmitate:

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Monkey  
 Application Route: Ingestion  
 Result: positive

Reproductive toxicity - Assessment : Positive evidence of adverse effects on development from human epidemiological studies.

#### (dl)-a-Tocopheryl acetate:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
 Species: Rat  
 Application Route: Ingestion  
 Result: negative

Effects on foetal development : Test Type: Embryo-foetal development  
 Species: Rabbit  
 Application Route: Ingestion  
 Result: negative

### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Causes damage to organs (Liver) through prolonged or repeated exposure.

### Components:

#### Vitamin A Palmitate:

Exposure routes : Ingestion  
 Target Organs : Liver  
 Assessment : Causes damage to organs through prolonged or repeated

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Remarks : exposure.  
 : Based on data from similar materials

### Colecalciferol:

Exposure routes : Ingestion  
 Target Organs : Kidney, Blood, Bone  
 Assessment : Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

### Repeated dose toxicity

#### Components:

#### Vitamin A Palmitate:

Species : Rat  
 LOAEL : > 1 - 10 mg/kg  
 Application Route : Ingestion  
 Exposure time : 3 Months  
 Remarks : Based on data from similar materials

#### (dl)-a-Tocopheryl acetate:

Species : Rat  
 NOAEL : 500 mg/kg  
 Application Route : Ingestion  
 Exposure time : 90 Days

#### Colecalciferol:

Species : Rat  
 NOAEL : 0.06 mg/kg  
 LOAEL : 0.3 mg/kg  
 Application Route : Ingestion  
 Exposure time : 90 Days  
 Method : OECD Test Guideline 408

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Components:

#### Vitamin A Palmitate:

Ingestion : Symptoms: liver impairment  
 Remarks: Based on data from similar materials  
  
 Symptoms: Embryo-foetal toxicity  
 Remarks: Based on data from similar materials

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### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **Vitamin A Palmitate:**

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): > 1,000 mg/l  
 Exposure time: 96 h  
 Method: DIN 38412  
 Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202  
 Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 152.94 mg/l  
 Exposure time: 72 h

##### **(dl)-a-Tocopheryl acetate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
 Exposure time: 48 h  
 Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201
- NOEC (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201
- Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 100 mg/l  
 Exposure time: 28 d
- Toxicity to microorganisms : EC50: > 927 mg/l  
 Exposure time: 30 min  
 Method: ISO 8192

##### **Colecalciferol:**

- Toxicity to fish : LL50 (Danio rerio (zebra fish)): > 100 mg/l  
 Exposure time: 96 h  
 Method: OECD Test Guideline 203
- Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): > 100 mg/l

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aquatic invertebrates      Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EL50 (Scenedesmus capricornutum (fresh water algae)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201

**Persistence and degradability****Components:****Vitamin A Palmitate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 40 - 50 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

**(dl)-a-Tocopheryl acetate:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 21.7 - 31 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

**Colecalciferol:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: <= 7 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301C

**Bioaccumulative potential****Components:****Vitamin A Palmitate:**

Partition coefficient: n-octanol/water : log Pow: > 6.2

**Colecalciferol:**

Partition coefficient: n-octanol/water : log Pow: > 6.2  
Method: OECD Test Guideline 107

**Mobility in soil**

No data available

**Hazardous to the ozone layer**

Not applicable

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues            : Dispose of in accordance with local regulations.  
Contaminated packaging        : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

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**14. TRANSPORT INFORMATION****International Regulations****UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

Refer to section 15 for specific national regulation.

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**15. REGULATORY INFORMATION****Related Regulations****Fire Service Law**

Group 4, Type 4 petroleum, (6000 litre), Hazardous rank III

**Chemical Substance Control Law**

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

**Industrial Safety and Health Law****Harmful Substances Prohibited from Manufacture**

Not applicable

**Harmful Substances Required Permission for Manufacture**

Not applicable

**Substances Prevented From Impairment of Health**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity**

Not applicable

**Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity**

Not applicable

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**Substances Subject to be Notified Names**

Not applicable

**Substances Subject to be Indicated Names**

Not applicable

**Ordinance on Prevention of Hazards Due to Specified Chemical Substances**

Not applicable

**Ordinance on Prevention of Lead Poisoning**

Not applicable

**Ordinance on Prevention of Tetraalkyl Lead Poisoning**

Not applicable

**Ordinance on Prevention of Organic Solvent Poisoning**

Not applicable

**Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)**

Not applicable

**Poisonous and Deleterious Substances Control Law**

Not applicable

**Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof**

Not applicable

**High Pressure Gas Safety Act**

Not applicable

**Explosive Control Law**

Not applicable

**Vessel Safety Law**

Not regulated as a dangerous good

**Aviation Law**

Not regulated as a dangerous good

**Marine Pollution and Sea Disaster Prevention etc Law**

Bulk transportation                    : Noxious liquid substance(Category Y)

Pack transportation                   : Not classified as marine pollutant

**Narcotics and Psychotropics Control Act**

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable

**Waste Disposal and Public Cleansing Law**

Industrial waste

**The components of this product are reported in the following inventories:**

AICS                                        : not determined

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DSL : not determined

IECSC : not determined

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**16. OTHER INFORMATION****Further information**

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

**Full text of other abbreviations**

AllC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be



## Multivitamin (with Soy Oil) Formulation

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considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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