

## Multivitamin (with Soy Oil) Formulation

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 06.04.2024
 4257977-00014
 Date of first issue: 06.05.2019

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Multivitamin (with Soy Oil) Formulation

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

Use of the Sub- : Veterinary product

stance/Mixture

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

20 Spartan Road

1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person

responsible for the SDS

EHSDATASTEWARD@msd.com

## 1.4 Emergency telephone number

+1-908-423-6000

# **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

### Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 1A H36

Specific target organ toxicity - repeated

exposure, Category 1

Long-term (chronic) aquatic hazard, Cat-

egory 4

H360D: May damage the unborn child.

H372: Causes damage to organs through pro-

longed or repeated exposure.

H413: May cause long lasting harmful effects to

aquatic life.

### 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

Signal word : Danger

Hazard statements : H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or re-

peated exposure.



# Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

H413 May cause long lasting harmful effects to aquatic life.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Hazardous components which must be listed on the label:

Vitamin A Palmitate

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

## Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Soya oil	8001-22-7 232-274-4	Aquatic Chronic 4; H413	>= 70 - < 90
Vitamin A Palmitate	79-81-2 201-228-5	Repr. 1A; H360D STOT RE 1; H372 (Liver) Aquatic Chronic 4; H413	>= 20 - < 25
(dl)-a-Tocopheryl acetate	7695-91-2 231-710-0		>= 1 - < 10
Colecalciferol	67-97-0 200-673-2 603-180-00-4	Acute Tox. 2; H300 Acute Tox. 2; H330 Acute Tox. 2; H310 STOT RE 1; H372 (Kidney, Blood, Bone) Aquatic Chronic 4; H413	>= 0,1 - < 0,25

For explanation of abbreviations see section 16.



# Multivitamin (with Soy Oil) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 4257977-00014 Date of first issue: 06.05.2019 4.0

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General advice In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

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).

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.

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

Risks May damage the unborn child.

Causes damage to organs through prolonged or repeated

exposure.

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

**Treatment** : Treat symptomatically and supportively.

## **SECTION 5: Firefighting measures**

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

### 5.2 Special hazards arising from the substance or mixture

fighting

Specific hazards during fire- : Exposure to combustion products may be a hazard to health.



## Multivitamin (with Soy Oil) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 4257977-00014 Date of first issue: 06.05.2019 4.0

Hazardous combustion prod- : Carbon oxides

5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

#### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

### 6.2 Environmental precautions

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.

### 6.3 Methods and material for containment and cleaning up

Methods for 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 absor-

bent.

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 deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

### **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling



## **Multivitamin (with Soy Oil) Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 30.09.2023

 4.0
 06.04.2024
 4257977-00014
 Date of first issue: 06.05.2019

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

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 as-

sessment

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.

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 contami-

nated clothing before re-use.

## 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage

areas and containers

Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national

regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides

Explosives Gases

7.3 Specific end use(s)

Specific use(s) : No data available

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Vitamin A Palmi- tate	79-81-2	TWA	>= 1 < 10 ug/m3 (OEB 4)	Internal
(dl)-a-Tocopheryl acetate	7695-91-2	TWA	5000 ug/m3 (OEB 1)	Internal
Colecalciferol	67-97-0	TWA	5 μg/m3 (OEB 4)	Internal
		Wipe limit	50 μg/100 cm <sup>2</sup>	Internal

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:



## Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

Substance name	End Use	Exposure routes	Potential health effects	Value
Vitamin A Palmitate	Workers	Inhalation	Long-term systemic effects	1,6 mg/m3
(dl)-a-Tocopheryl acetate	Workers	Inhalation	Long-term systemic effects	73,5 mg/m3
	Workers	Skin contact	Long-term systemic effects	416,6 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	21,7 mg/m3
	Consumers	Skin contact	Long-term systemic effects	250 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	12,5 mg/kg bw/day

## Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Vitamin A Palmitate	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l
	Intermittent use/release	1 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	595000 mg/kg
	Marine sediment	5950000 mg/kg
	Soil	2100000 mg/kg
(dl)-a-Tocopheryl acetate	Fresh water	0,27 mg/l
	Freshwater - intermittent	0,27 mg/l
	Marine water	0,027 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	212000 mg/kg
		dry weight (d.w.)
	Marine sediment	21200 mg/kg dry
		weight (d.w.)
	Soil	74800 mg/kg dry
		weight (d.w.)

### 8.2 Exposure controls

### **Engineering measures**

Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust ventilation.

#### Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:

Safety glasses

Hand protection

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



## Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical re-

sistance data and an assessment of the local exposure poten-

tial.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Organic vapour type (A)

## **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Appearance : Aqueous solution

Colour : yellow
Odour : characteristic
Odour Threshold : No data available

pH : No data available

Melting point/freezing point : -5 °C

Initial boiling point and boiling : 194 °C

range

Flash point : 244 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 0,9 - 0,94

Density : No data available

Solubility(ies)

Water solubility : practically insoluble Solubility in other solvents : slightly soluble

Solvent: Ethanol

Partition coefficient: n-

octanol/water

: Not applicable

Auto-ignition temperature

No data available



## Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 68,41 - 68,81 mPa.s (25 °C)

Method: Brookfield

Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

9.2 Other information

Flammability (liquids) : Not applicable

Molecular weight : No data available

Particle size : Not applicable

## **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

Not classified as a reactivity hazard.

## 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

Information on likely routes of : Inhalation

exposure Skin contact Ingestion

Eye contact

## Acute toxicity

Not classified based on available information.



# Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

**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

Result : No skin irritation



# Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

### Serious eye damage/eye irritation

Not classified based on available information.

### **Components:**

### Vitamin A Palmitate:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

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

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

#### 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

## Germ cell mutagenicity

Not classified based on available information.



## Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

**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

cytogenetic 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

cytogenetic 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

cytogenetic 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

Result: positive

Germ cell mutagenicity- As- : Weight of evidence does not support classification as a germ



## **Multivitamin (with Soy Oil) Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

sessment 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 develop- :

ment

Test Type: Embryo-foetal development

Species: Monkey

Application Route: Ingestion

Result: positive

Reproductive toxicity - As-

sessment

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 develop-

ment

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 through prolonged or repeated exposure.

**Components:** 

Vitamin A Palmitate:

Exposure routes : Ingestion Target Organs : Liver

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Remarks : Based on data from similar materials



# Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

Colecalciferol:

Exposure routes : Ingestion

Target Organs : Kidney, Blood, Bone

Assessment : Shown to produce significant health effects in animals at con-

centrations of 10 mg/kg bw or less.

Repeated dose toxicity

**Components:** 

Soya oil:

Species : Rat

NOAEL : 4.000 mg/kg
Application Route : Ingestion
Exposure time : 90 h

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



## Multivitamin (with Soy Oil) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 4257977-00014 Date of first issue: 06.05.2019 4.0

## **SECTION 12: Ecological information**

### 12.1 Toxicity

## 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

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

EC50: > 927 mg/l Toxicity to microorganisms

Exposure time: 30 min Method: ISO 8192

Toxicity to fish (Chronic tox-

icity)

NOEC: 100 mg/l

Exposure time: 28 d

Species: Oncorhynchus mykiss (rainbow trout)

Colecalciferol:

: LL50 (Danio rerio (zebra fish)): > 100 mg/l Toxicity to fish

Exposure time: 96 h

Method: OECD Test Guideline 203



# Multivitamin (with Soy Oil) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 4257977-00014 Date of first issue: 06.05.2019 4.0

Toxicity to daphnia and other: EL50 (Daphnia magna (Water flea)): > 100 mg/l

aquatic invertebrates Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic EL50 (Scenedesmus capricornutum (fresh water algae)): >

100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 201

### 12.2 Persistence and degradability

### **Components:**

plants

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

### 12.3 Bioaccumulative potential

#### **Components:**

Soya oil:

Partition coefficient: nlog Pow: > 4

Remarks: Calculation octanol/water

Vitamin A Palmitate:

Partition coefficient: nlog Pow: > 6.2

octanol/water

Colecalciferol:

Partition coefficient: nlog Pow: > 6,2

octanol/water Method: OECD Test Guideline 107

12.4 Mobility in soil

No data available



## **Multivitamin (with Soy Oil) Formulation**

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

### 12.5 Results of PBT and vPvB assessment

**Product:** 

Assessment : This substance/mixture contains no components considered

to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of

0.1% or higher.

#### 12.6 Other adverse effects

**Product:** 

Endocrine disrupting poten-

tial

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at

levels of 0.1% or higher.

### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

## **SECTION 14: Transport information**

## 14.1 UN number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

### 14.2 UN proper shipping name

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

## 14.3 Transport hazard class(es)



# Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

## **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

AICS : not determined

DSL : not determined

IECSC : not determined

## 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

### **SECTION 16: Other information**

Other information : Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

**Full text of H-Statements** 

H300 : Fatal if swallowed.

H310 : Fatal in contact with skin.



## Multivitamin (with Soy Oil) Formulation

Version **Revision Date:** SDS Number: Date of last issue: 30.09.2023 06.04.2024 4257977-00014 Date of first issue: 06.05.2019 4.0

H330 Fatal if inhaled.

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated

exposure.

H413 May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Acute Tox. Acute toxicity

Long-term (chronic) aquatic hazard Aquatic Chronic

Repr. Reproductive toxicity

STOT RE Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI -Thailand Existing Chemicals Inventory; 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

### **Further information**

compile the Safety Data

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

Sheet cy, http://echa.europa.eu/

Classification of the mixture:

Classification procedure:

Calculation method Repr. 1A H360D STOT RE 1 H372 Calculation method



## Multivitamin (with Soy Oil) Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 4.0 06.04.2024 4257977-00014 Date of first issue: 06.05.2019

Aquatic Chronic 4 H413 Calculation method

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

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 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.

ZA / EN