SAFETY DATA SHEET

Multivitamin (with Soy Oil) Formulation

Version 2.0  Revision Date: 24.06.2021  SDS Number: 4257966-00006  Date of last issue: 10.10.2020
Date of first issue: 06.05.2019

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Multivitamin (with Soy Oil) Formulation

Manufacturer or supplier’s details
Company: MSD
Address: Talcahuano 750, 6th floor, Ciudad Autonoma
Buenos Aires, Argentina  C1013AAP
Telephone: 908-740-4000
Emergency telephone: 1-908-423-6000
E-mail address: EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use: Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Skin irritation: Category 3
Reproductive toxicity: Category 1A
Specific target organ toxicity - repeated exposure: Category 1 (Liver)

GHS label elements
Hazard pictograms:
Signal Word: Danger
Hazard Statements: H316 Causes mild skin irritation.
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 vapors.
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-
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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A Palmitate</td>
<td>79-81-2</td>
<td>&gt;= 20 - &lt; 25</td>
</tr>
<tr>
<td>(dl)-a-Tocopheryl acetate</td>
<td>7695-91-2</td>
<td>&gt;= 5 - &lt; 10</td>
</tr>
<tr>
<td>Colecalciferol</td>
<td>67-97-0</td>
<td>&gt;= 0.1 - &lt; 0.25</td>
</tr>
</tbody>
</table>

SECTION 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 : Causes mild skin irritation.
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).
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Notes to physician: Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Water spray
  Alcohol-resistant foam
  Carbon dioxide (CO2)
  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 fire-fighters: In the event of fire, wear self-contained breathing apparatus.
  Use personal protective equipment.

SECTION 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 diking or other appropriate containment to keep material from spreading. If diked 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.

SECTION 7. HANDLING AND STORAGE

- Technical measures: See Engineering measures under EXPOSURE
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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 vapors.
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.

Conditions for safe storage : Keep in properly labeled 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:
Strong oxidizing agents
Organic peroxides
Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin A Palmitate</td>
<td>79-81-2</td>
<td>TWA</td>
<td>&gt;= 1 &lt; 10 ug/m³ (OEB 4)</td>
<td>Internal</td>
</tr>
<tr>
<td>(dl)-a-Tocopheryl acetate</td>
<td>7695-91-2</td>
<td>TWA</td>
<td>5000 ug/m³ (OEB 1)</td>
<td>Internal</td>
</tr>
<tr>
<td>Colecalciferol</td>
<td>67-97-0</td>
<td>TWA</td>
<td>5 µg/m³ (OEB 4)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>50 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>

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 Hand protection : Organic vapor Type

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration 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).

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aqueous solution
Color : yellow
Odor : characteristic
Odor Threshold : No data available
pH : No data available
Melting point/freezing point : -5 °C
Initial boiling point and boiling range : 194 °C
Flash point : 244 °C
Evaporation rate : No data available
Flammability (solid, gas) : Not applicable
Flammability (liquids) : Not applicable
Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available
Vapor pressure : No data available
Relative vapor 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
Autoignition temperature : No data available
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.
Molecular weight : No data available
Particle size : Not applicable

SECTION 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.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
  Not classified based on available information.

Product:
  Acute oral toxicity : Acute toxicity estimate: > 5.000 mg/kg
    Method: Calculation method
Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity: Acute toxicity estimate: > 5.000 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 judgment

Acute dermal toxicity: Acute toxicity estimate: 50 mg/kg
Method: Expert judgment

Skin corrosion/irritation
Causes mild skin irritation.

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

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 sensitization

Skin sensitization
- Not classified based on available information.

Respiratory sensitization
- Not classified based on available information.

Components:

Vitamin A Palmitate:
- **Test Type**: Maximization Test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Method**: OECD Test Guideline 406
- **Result**: negative

(dl)-a-Tocopheryl acetate:
- **Test Type**: Draize Test
- **Routes of exposure**: Skin contact
- **Species**: Humans
- **Result**: negative

Colecalciferol:
- **Test Type**: Maurer optimisation test
- **Routes of exposure**: Skin contact
- **Species**: Guinea pig
- **Result**: negative

Germ cell mutagenicity
- Not classified based on available information.

Components:

Vitamin A Palmitate:
- **Genotoxicity in vitro**: Test Type: Bacterial reverse mutation assay (AMES)
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 - 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:

<table>
<thead>
<tr>
<th>Species</th>
<th>Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>Ingestion</td>
</tr>
<tr>
<td>Exposure time</td>
<td>104 weeks</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
</tbody>
</table>

Reproductive toxicity

May damage the unborn child.

Components:

Vitamin A Palmitate:

Effects on fetal development: Test Type: Embryo-fetal 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 fetal development: Test Type: Embryo-fetal 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:

Routes of exposure: Ingestion  
Target Organs: Liver  
Assessment: Causes damage to organs through prolonged or repeated exposure.  
Remarks: Based on data from similar materials
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Colecaciferol:
Routes of exposure: 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

Colecaciferol:
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-fetal toxicity.
Remarks: Based on data from similar materials

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
Vitamin A Palmitate:
Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): > 1.000 mg/l
Exposure time: 96 h
<table>
<thead>
<tr>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: DIN 38412</td>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 48 h</td>
<td>Methods: OECD Test Guideline 202</td>
</tr>
<tr>
<td>Toxicity to algae/aquatic plants: EC50 (Desmodesmus subspicatus (green algae)): 152.94 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 72 h</td>
<td></td>
</tr>
<tr>
<td>(dl)-a-Tocopheryl acetate:</td>
<td></td>
</tr>
<tr>
<td>Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 96 h</td>
<td>Methods: OECD Test Guideline 203</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 48 h</td>
<td>Methods: OECD Test Guideline 202</td>
</tr>
<tr>
<td>Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 72 h</td>
<td>Methods: OECD Test Guideline 201</td>
</tr>
<tr>
<td>NOEC (Pseudokirchneriella subcapitata (green algae)): &gt;= 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 72 h</td>
<td>Methods: OECD Test Guideline 201</td>
</tr>
<tr>
<td>Toxicity to fish (Chronic toxicity): NOEC (Oncorhynchus mykiss (rainbow trout)): 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 28 d</td>
<td></td>
</tr>
<tr>
<td>Toxicity to microorganisms: EC50: &gt; 927 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 30 min</td>
<td>Methods: ISO 8192</td>
</tr>
<tr>
<td>Colecalciferol:</td>
<td></td>
</tr>
<tr>
<td>Toxicity to fish: LL50 (Danio rerio (zebra fish)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 96 h</td>
<td>Methods: OECD Test Guideline 203</td>
</tr>
<tr>
<td>Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 48 h</td>
<td>Methods: OECD Test Guideline 202</td>
</tr>
<tr>
<td>Toxicity to algae/aquatic plants: EL50 (Scenedesmus capricornutum (fresh water algae)): &gt; 100 mg/l</td>
<td></td>
</tr>
<tr>
<td>Exposure time: 96 h</td>
<td>Methods: OECD Test Guideline 201</td>
</tr>
</tbody>
</table>
Persistence and degradability

Components:

Vitamin A Palmitate:

(dl)-a-Tocopheryl acetate:

Colecalciferol:

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

Other adverse effects
No data available

SECTION 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.

SECTION 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.

SECTION 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Argentina. Carcinogenic Substances and Agents Registry: Not applicable

Control of precursors and essential chemicals for the preparation of drugs: Not applicable

International Regulations

The ingredients of this product are reported in the following inventories:
AICS: not determined
DSL: not determined
IECSC: not determined

SECTION 16. OTHER INFORMATION

Further 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 other abbreviations

AIIC - 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 Sys-
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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.

AR / Z8