SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Ovipast Plus Formulation

Manufacturer or supplier’s details
Company : MSD
Address : Rua Coronel Bento Soares, 530
Cruzeiro - Sao Paulo - Brazil  CEP 12730-340
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 medicine

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard
Skin sensitization : Category 1

GHS label elements in accordance with ABNT NBR 14725 Standard
Hazard pictograms :

Signal Word : Warning
Hazard Statements : H317 May cause an allergic skin reaction.
Precautionary Statements : Prevention:
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Other hazards which do not result in classification
None known.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum hydroxide</td>
<td>21645-51-2</td>
<td>Acute toxicity (Oral), Category 4</td>
<td>25</td>
</tr>
<tr>
<td>Antigen</td>
<td>Not Assigned</td>
<td></td>
<td>&gt; 1.5 -&lt; 2.5</td>
</tr>
<tr>
<td>Maleic acid</td>
<td>110-16-7</td>
<td>Acute toxicity (Oral), Category 4</td>
<td>0,23</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute toxicity (Dermal), Category 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin corrosion, Category 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serious eye damage, Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin sensitization, Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific target organ toxicity - single exposure, Category 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short-term (acute) aquatic hazard, Category 3</td>
<td></td>
</tr>
<tr>
<td>Thiomersal</td>
<td>54-64-8</td>
<td>Acute toxicity (Oral), Category 2</td>
<td>0,013</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acute toxicity (Inhalation), Category 2</td>
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<tr>
<td></td>
<td></td>
<td>Acute toxicity (Dermal), Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reproductive toxicity, Category 1B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific target organ toxicity - repeated exposure (Central nervous system, Cardio-vascular system, Gastrointestinal tract, Kidney), Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short-term (acute) aquatic hazard, Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term (chronic) aquatic hazard, Category 1</td>
<td></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 if symptoms occur.

In case of skin contact: In case of contact, immediately flush skin with soap and 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 if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed: May cause an allergic skin reaction.

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.

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
Metal 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 CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation:
- Use only with adequate ventilation.

Advice on safe handling:
- Do not get on skin or clothing.
- Avoid breathing mist or vapors.
- Do not swallow.
- Avoid contact with eyes.
- Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
- 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.
- Contaminated work clothing should not be allowed out of the workplace.
- Wash contaminated clothing before re-use.
- The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

Conditions for safe storage:
- Keep in properly labeled containers.
- Store in accordance with the particular national regulations.

Materials to avoid:
- Do not store with the following product types:
  - Strong oxidizing agents

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)</th>
<th>Control parameters / Permissible</th>
<th>Basis</th>
</tr>
</thead>
</table>

| 4 / 15 |
### Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Laboratory operations do not require special containment.

### 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**: Particulates type
- **Hand protection Material**: Chemical-resistant gloves

**Eye protection**
- Wear safety glasses with side shields or goggles.
  - If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
  - Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection**
- Work uniform or laboratory coat.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- suspension

**Color**
- off-white to beige, opaque

**Odor**
- No data available

**Odor Threshold**
- No data available

**pH**
- 6.1 - 6.9

**Melting point/freezing point**
- No data available

**Initial boiling point and boiling range**
- No data available

**Flash point**
- Not applicable
Evaporation rate : No data available

Flammability (solid, gas) : Not applicable
Flammability (liquids) : No data available

Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : similar to water
Relative vapor density : No data available
Relative density : 1

Density : 1 g/cm³
similar to water

Solubility(ies)
Water solubility : soluble

Partition coefficient: n-octanol/water : Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : No data available
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.
Molecular weight : Not applicable
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.

Components:

**Aluminum hydroxide:**
- Acute oral toxicity:
  - LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 423
  - Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity:
  - LC50 (Rat): > 5,09 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Assessment: The substance or mixture has no acute inhalation toxicity
  - Remarks: Based on data from similar materials

**Maleic acid:**
- Acute oral toxicity:
  - LD50 (Rat): > 300 - 2,000 mg/kg
  - Method: OECD Test Guideline 401
  - Remarks: Based on data from similar materials
- Acute dermal toxicity:
  - LD50 (Rabbit): 1,560 mg/kg

**Thiomersal:**
- Acute oral toxicity:
  - LD50 (Rat): 75 mg/kg
  - Acute toxicity estimate: 10 mg/kg
  - Method: Expert judgment
  - Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
- Acute inhalation toxicity:
  - Acute toxicity estimate: 0,1 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: Expert judgment
  - Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
- Acute dermal toxicity:
  - Acute toxicity estimate: 10 mg/kg
  - Method: Expert judgment
  - Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Skin corrosion/irritation
Not classified based on available information.

**Components:**

**Aluminum hydroxide:**
- **Species:** Rabbit
- **Method:** OECD Test Guideline 404
- **Result:** No skin irritation

**Maleic acid:**
- **Species:** in vitro membrane barrier
- **Method:** OECD Test Guideline 435
- **Result:** Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation
Not classified based on available information.

**Components:**

**Aluminum hydroxide:**
- **Species:** Rabbit
- **Result:** No eye irritation
- **Method:** OECD Test Guideline 405

**Maleic acid:**
- **Result:** Irreversible effects on the eye
- **Remarks:** Based on skin corrosivity.

Respiratory or skin sensitization

Skin sensitization
May cause an allergic skin reaction.

**Respiratory sensitization**
Not classified based on available information.

**Components:**

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

**Maleic acid:**
- **Test Type:** Maximization Test
- **Routes of exposure:** Skin contact
- **Species:** Guinea pig
- **Method:** OECD Test Guideline 406
- **Result:** positive
Assessment : Probability or evidence of skin sensitization in humans

Germ cell mutagenicity
Not classified based on available information.

Components:
Aluminum hydroxide:
Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Result: positive
Remarks: Based on data from similar materials

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: equivocal
Remarks: Based on data from similar materials

Test Type: In vitro micronucleus test
Result: positive
Remarks: Based on data from similar materials

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

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

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

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

Genotoxicity in vivo : Test Type: Mammalian spermatogonial chromosome aberration test (in vivo)
Species: Mouse
Application Route: Ingestion
Result: negative
Carcinogenicity
Not classified based on available information.

**Components:**

**Aluminum hydroxide:**
Species: Rat
Application Route: inhalation (dust/mist/fume)
Exposure time: 86 weeks
Result: negative
Remarks: Based on data from similar materials

**Maleic acid:**
Species: Rat
Application Route: Ingestion
Exposure time: 2 Years
Result: negative
Remarks: Based on data from similar materials

**Thiomersal:**
Species: Rat
Exposure time: 1 Years
Result: negative

Reproductive toxicity
Not classified based on available information.

**Components:**

**Aluminum hydroxide:**
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative

**Maleic acid:**
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative  
Remarks: Based on data from similar materials

**Thiomersal:**  
Effects on fetal development : Species: Rat  
Application Route: Ingestion  
Result: positive  
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

**STOT-single exposure**  
Not classified based on available information.

**Components:**

**Maleic acid:**  
Assessment : May cause respiratory irritation.  
Remarks : Based on harmonised classification in EU regulation 1272/2008, Annex VI

**STOT-repeated exposure**  
Not classified based on available information.

**Components:**

**Thiomersal:**  
Target Organs : Central nervous system, Cardio-vascular system, Gastrointestinal tract, Kidney  
Assessment : Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity**

**Components:**

**Aluminum hydroxide:**  
Species : Rat  
NOAEL : > 100 mg/kg  
Application Route : Ingestion  
Exposure time : 364 Days  
Method : OECD Test Guideline 426  
Remarks : Based on data from similar materials

Species : Rat  
NOAEL : > 0.2 mg/kg  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 12 Months  
Remarks : Based on data from similar materials

**Thiomersal:**  
Species : Rat
LOAEL: >= 0.5 mg/kg
Application Route: Ingestion
Remarks: Based on data from similar materials

Aspiration toxicity
Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Aluminum hydroxide:
Toxicity to fish: LL50 (Salmo trutta (brown trout)): > 100 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Toxicity to algae/aquatic plants: EL50 (Selenastrum capricornutum (green algae)): > 100 mg/l
Exposure time: 96 h

Maleic acid:
Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): > 10 - 100 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 42.81 mg/l
Exposure time: 48 h
Test substance: Neutralized product
Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): 74.35 mg/l
Exposure time: 72 h
Test substance: Neutralized product
Method: OECD Test Guideline 201
EC10 (Pseudokirchneriella subcapitata (green algae)): 11.8 mg/l
Exposure time: 72 h
Test substance: Neutralized product
Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Remarks: Based on data from similar materials
Toxicity to microorganisms: EC10 (Pseudomonas putida): 44.6 mg/l
Exposure time: 18 h
Test substance: Neutralized product
### Thiomersal:
**Toxicity to fish**
- LC50 (Poecilia reticulata (guppy)): > 0,01 - 0,1 mg/l
- Exposure time: 96 h
- Remarks: Based on data from similar materials

**Toxicity to daphnia and other aquatic invertebrates**
- EC50 (Daphnia magna (Water flea)): > 0,01 - 0,1 mg/l
- Exposure time: 48 h
- Remarks: Based on data from similar materials

**Toxicity to algae/aquatic plants**
- EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,01 - 0,1 mg/l
- Exposure time: 96 h
- Remarks: Based on data from similar materials

### M-Factor (Acute aquatic toxicity)
- 10

### M-Factor (Chronic aquatic toxicity)
- 10

### Persistence and degradability

#### Components:

**Maleic acid:**
- Biodegradability: Result: Readily biodegradable.
- Biodegradation: 97%
- Exposure time: 28 d
- Method: OECD Test Guideline 301B

### Bioaccumulative potential

#### Components:

**Maleic acid:**
- Partition coefficient: n-octanol/water: log Pow: -1,3

### 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 facility.

---

Method: DIN 38 412 Part 8
SAFETY DATA SHEET

Ovipast Plus Formulation

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.

Domestic regulation

ANTT
Not regulated as a dangerous good

Section 15. Regulatory Information

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

National List of Carcinogenic Agents for Humans - (LINACH) : Not applicable

Brazil. List of chemicals controlled by the Federal Police : 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


Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
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.