1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Pfizer Animal Health
Pfizer Inc
235 East 42nd Street
New York, NY 10017
Poison Control Center Phone: 1-866-531-8896
Technical Services Phone: 1-800-366-5288

Pfizer Ltd,
Kent
CT13 9NJ
United Kingdom
+00 44 (0)1304 616161

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
ChemSafe (24 hours): +44 (0)208 762 8322

Material Name: Bovine Rhinotracheitis-Virus Diarrhea-Parainfluenza3-Respiratory Syncytial Virus Vaccine, Modified Live Virus-Leptospira Canicola-Grippotyphosa-Hardjo-Ichtershaemorrhagiae-Pomona Bacterin

Trade Name: Bovi-Shield GOLD® FP™ 5L5
Chemical Family: Mixture
Intended Use: Veterinary Vaccine

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous</th>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS List</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gentamicin</td>
<td>1403-66-3</td>
<td>215-765-8</td>
<td>##</td>
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<tr>
<td></td>
<td>Merthiolate (as mercury)</td>
<td>54-64-8</td>
<td>200-210-4</td>
<td>##</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS List</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovine Parainfluenza3</td>
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<td>*</td>
</tr>
<tr>
<td>Bovine Rhinotrachetitis</td>
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<td>*</td>
</tr>
<tr>
<td>Bovine Respiratory Syncytial Virus</td>
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<td>Not listed</td>
<td>*</td>
</tr>
<tr>
<td>Bovine Virus Diarrhea</td>
<td>NOT ASSIGNED</td>
<td>Not listed</td>
<td>*</td>
</tr>
<tr>
<td>Leptospira canicola</td>
<td>NOT ASSIGNED</td>
<td>Not listed</td>
<td>*</td>
</tr>
<tr>
<td>Leptospira grippotyphosa</td>
<td>NOT ASSIGNED</td>
<td>Not listed</td>
<td>*</td>
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<tr>
<td>Leptospira hardjo</td>
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<td>*</td>
</tr>
<tr>
<td>Leptospira icterohaemorrhagiae</td>
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<td>Not listed</td>
<td>*</td>
</tr>
<tr>
<td>Leptospira pomona</td>
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<td>Aluminum hydroxide</td>
<td>21645-51-2</td>
<td>244-492-7</td>
<td>*</td>
</tr>
</tbody>
</table>

Additional Information: * Proprietary
## Trace
Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

3. HAZARDS IDENTIFICATION

Appearance: Freeze-dried preparation plus a liquid adjuvanted preparation

Statement of Hazard: Non-hazardous in accordance with international standards for workplace safety.

Additional Hazard Information:
Short Term: May cause allergic skin reaction. Dust irritating to respiratory tract. In the event of accidental injection, an allergic reaction may occur. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted.

EU Indication of danger: Not classified

Note: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for at least 15 minutes. If irritation occurs or persists, get medical attention.

Skin Contact: Wash skin with soap and water. If irritation occurs or persists, get medical attention.

Ingestion: Get medical attention. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

Extinguishing Media: As for primary cause of fire.

Hazardous Combustion Products: Not known

Fire Fighting Procedures: Treat primary cause of fire.

Fire / Explosion Hazards: Fine particles (such as dust and mists) may fuel fires/explosions.

6. ACCIDENTAL RELEASE MEASURES

Health and Safety Precautions: Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Measures for Cleaning / Collecting: Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly. Avoid generating airborne dust.

Measures for Environmental Protections: Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Additional Consideration for Large Spills: Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

General Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use appropriate personal protective equipment.

Storage Conditions: Store under refrigeration in closed container.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Merthiolate (as mercury)

OSHA - Final PELS - TWAs: = 0.01 mg/m³ TWA
ACGIH Threshold Limit Value (TWA) = 0.01 mg/m³ TWA
ACGIH Threshold Limit Value (STEL) = 0.03 mg/m³ STEL
ACGIH - Skin Absorption Designation
Australia STEL = 0.03 mg/m³ STEL
Australia TWA = 0.01 mg/m³ TWA

Engineering Controls: Engineering controls should be used as the primary means to control exposures. Exposure monitoring may be necessary to determine requirements.

Personal Protective Equipment:

Hands: Wear impervious gloves if skin contact is possible.
Eyes: Safety glasses or goggles
Skin: Wear protective clothing when working with large quantities. Wash hands and arms thoroughly after handling this material.
Respiratory protection: In the event of a spill where the applicable Occupational Exposure Limit (OEL) may be exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures below the OEL.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Freeze-dried preparation plus Liquid
Molecular Formula: Mixture
Color: No data available.
Molecular Weight: Mixture
Solubility: Soluble: Water (based on components)
PH: 7.0 +/- 1.5
Boiling Point (°C): >100
Specific Gravity: 1.0 +/-0.2

Flash Point (Liquid) (°C): Non-flammable

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Avoid prolonged exposure to higher temperatures and/or direct sunlight. Do not freeze.
Incompatible Materials: None known
Hazardous Decomposition Products: None known
Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION
General Information: The antigens included in this product are non-infectious. All have been prepared from killed or inactivated preparations of microorganisms. The information included in this section describes the potential hazards of the individual ingredients.

**Acute Toxicity: (Species, Route, End Point, Dose)**

- **Merthiolate (as mercury)**
  - Rat Oral LD50 75 mg/kg
  - Rat Subcutaneous LD50 98 mg/kg

- **Gentamicin**
  - Rat Oral LD50 6600 mg/kg
  - Rat Subcutaneous LD50 710 mg/kg
  - Mouse IM LD50 167 mg/kg
  - Rat IM LD50 463 mg/kg

**Irritation / Sensitization: (Study Type, Species, Severity)**

- **Merthiolate (as mercury)**
  - Eye Irritation Rabbit Mild

- **Gentamicin**
  - Eye Irritation Rabbit Non-irritating

Skin Irritation / Sensitization: This product contains merthiolate which is considered to be a skin sensitizer.

**Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))**

- **Gentamicin**
  - Embryo / Fetal Development Rat Intramuscular 75 mg/kg/day LOAEL Developmental toxicity

**Carcinogen Status:** None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

**12. ECOLOGICAL INFORMATION**

**Environmental Overview:** The environmental characteristics of this material have not been fully evaluated. This product contains trace quantities of mercury, releases to the environment should be avoided.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Procedures:** Observe all local and national regulations when disposing of this material. This product contains trace quantities of mercury and may qualify as a RCRA Hazardous Waste. Status should be confirmed using the EPA Toxicity Characteristic Leaching Procedure (TCLP).

**14. TRANSPORT INFORMATION**

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.
15. REGULATORY INFORMATION

EU Indication of danger: Not classified

OSHA Label: Non-hazardous in accordance with international standards for workplace safety.

Canada - WHMIS: Classifications

WHMIS hazard class: None required
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Gentamicin
- California Proposition 65: Aminoglycosides- developmental
- Australia (AICS): Present
- Standard for the Uniform Scheduling for Drugs and Poisons: Schedule 4
- EU EINECS List: 215-765-8

Merthiolate (as mercury)
- CERCLA/SARA 313 Emission reporting: = 1.0 % Supplier notification limit
- California Proposition 65: Developmental
- Inventory - United States TSCA - Sect. 8(b): Present
- Australia (AICS): Present
- EU EINECS List: 200-210-4

Aluminum hydroxide
- Inventory - United States TSCA - Sect. 8(b): Present
- Australia (AICS): Present
- EU EINECS List: 244-492-7

16. OTHER INFORMATION

Reasons for Revision: Updated Section 3 - Hazard Identification. Updated Section 5 - Fire Fighting Measures. Updated Section 6 - Accidental Release Measures. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 11 - Toxicology Information. Updated Section 13 - Disposal Considerations.

Prepared by: Toxicology and Hazard Communication
Pfizer Global Environment, Health, and Safety
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End of Safety Data Sheet