SAFETY DATA SHEET

1. Identification

Product identifier           Rhinogard

Other means of identification

Synonyms                     Rhinogard Bovine Herpesvirus 1 Live Intranasal Vaccine for Feedlot Cattle * Rhinogard Bovine Herpesvirus 1 Live Intranasal Liquid Vaccine For Cattle

Recommended use of the chemical and restrictions on use

Recommended use              Veterinary vaccine
Restrictions on use           Not for human use

Details of manufacturer or importer

Company Name (AU)             Zoetis Australia Pty Ltd
ABN 94 156 476 425
Level 6, 5 Rider Boulevard
Rhodes NSW 2138 AUSTRALIA
Tel                           1800 814 883
Fax                           (02) 8876 0444
Email                         productsupport.au@zoetis.com
Emergency Phone              1800 814 883 (all hours)
Police and Fire Brigade       Dial 000
If ineffective                Dial Poisons Information Centre (13 1126 from anywhere in Australia)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards              Not classified.
Health hazards                Not classified.
Environmental hazards         Not classified.

Label elements, including precautionary statements

Hazard symbol(s)              None.
Signal word                   None.
Hazard statement(s)           The mixture does not meet the criteria for classification.
Precautionary statement(s)
Prevention                    Observe good industrial hygiene practices.
Response                      Wash hands after handling.
Storage                       Store away from incompatible materials.
Disposal                      Dispose of waste and residues in accordance with local authority requirements.
Other hazards which do not result in classification None known.

Supplemental information      Direct contact with eyes may cause temporary irritation. Allergic reactions are possible.

3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bovine Serum</td>
<td>Not assigned</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>Bovine Herpesvirus, type 1</td>
<td>Not assigned</td>
<td>*</td>
</tr>
<tr>
<td>Saline solution</td>
<td>Mixture</td>
<td></td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Material name: Rhinogard
3266
4. First-aid measures

Description of necessary first aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist. Call a poison centre or doctor/physician if you feel unwell.

**Skin contact**
Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

**Eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Ingestion**
Rinse mouth. Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

**Personal protection for first-aid responders**
Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Allergic reactions are possible. Signs and symptoms might include skin rash, itching, redness or swelling. Respiratory reactions may be characterized by rhinitis, sneezing, scratchy throat, oral mucosal edema, laryngeal mucosal edema, coughing, shortness of breath, wheezing, and chest pain. Asthma like reactions occur with acute exposures in sensitized patients.

**Symptoms caused by exposure**
If exposed or concerned: Get medical advice/attention. You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Medical attention and special treatment**
If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted.

5. Fire-fighting measures

**Extinguishing media**

**Suitable extinguishing media**
Do not use water jet.

**Unsuitable extinguishing media**
During fire, gases hazardous to health may be formed.

**Specific hazards arising from the chemical**
Firefighters should wear full protective clothing including self contained breathing apparatus.

**Special protective equipment and precautions for fire fighters**
During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

**Fire fighting equipment/instructions**
Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel
Keep unnecessary personnel away.

For emergency responders
Personnel must wear appropriate protective equipment (see Section 8).

**Environmental precautions**
Use appropriate containment to avoid environmental contamination.

**Methods and materials for containment and cleaning up**
Clean up in accordance with all applicable regulations. Ensure adequate ventilation. Remove sources of ignition. Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly. Prevent release to the environment.

Never return spills to original containers for re-use. Should not be released into the environment.

7. Handling and storage

**Precautions for safe handling**
When handling, use appropriate personal protective equipment (see Section 8). Avoid contact with eyes. Avoid contact with skin. Avoid breathing mist or vapour. Observe good industrial hygiene practices. Wash thoroughly after handling. Handle and open container with care. Avoid release to the environment.

**Conditions for safe storage, including any incompatibilities**
Store in a cool, dry place out of direct sunlight. Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls and personal protection

Control parameters
Follow standard monitoring procedures.

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines
No exposure standards allocated.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection
Wear safety glasses or goggles if eye contact is possible.

Skin protection
Hand protection
Wear impervious gloves if skin contact is possible.

Other
Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. No personal respiratory protective equipment normally required.

Thermal hazards
Not applicable.

Hygiene measures
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance
Two forms available: liquid vaccine and freeze-dried preparation plus saline for dilution.

Physical state
Solid, Liquid.

Form
Solid. Liquid.

Colour
Clear. Pink to Yellow. (After reconstitution).

Odour
Not available.

Odour threshold
Not available.

pH
Not available.

Melting point/freezing point
0 °C (32 °F)

Initial boiling point and boiling range
100 °C (212 °F)

Flash point
Not available.

Evaporation rate
Not available.

Flammability (solid, gas)
None known.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)
Not available.

Flammability limit - upper (%)
Not available.

Explosive limit - lower (%)
Not available.

Explosive limit – upper (%)
Not available.

Vapour pressure
2.37 kPa @ 20C

Vapour density
Not available.

Relative density
Not available.

Solubility(ies)

Solubility (water)
100 %

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
Not available.
### Decomposition temperature
Not available.

### Viscosity
Not available.

#### Other physical and chemical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not explosive.</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Not oxidising.</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

#### Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

#### Chemical stability
Material is stable under normal conditions.

#### Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

#### Conditions to avoid
Direct sources of heat. Contact with incompatible materials. Protect from freezing. Avoid exposure to light, sunlight and elevated temperatures.

#### Incompatible materials
As a precautionary measure, keep away from strong oxidizers.

#### Hazardous decomposition products
No hazardous decomposition products are known.

### 11. Toxicological information

#### Information on possible routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></td>
<td>Under normal conditions of intended use, this material is not expected to be an inhalation hazard.</td>
</tr>
<tr>
<td><strong>Skin contact</strong></td>
<td>Prolonged skin contact may cause temporary irritation.</td>
</tr>
<tr>
<td><strong>Eye contact</strong></td>
<td>Direct contact with eyes may cause temporary irritation.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Health injuries are not known or expected under normal use.</td>
</tr>
</tbody>
</table>

#### Symptoms related to exposure
Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or discomfort. Allergic reactions are possible. Signs and symptoms might include skin rash, itching, redness or swelling. Respiratory reactions may be characterized by rhinitis, sneezing, scratchy throat, oral mucosal edema, laryngeal mucosal edema, coughing, shortness of breath, wheezing, and chest pain. Asthma like reactions occur with acute exposures in sensitized patients.

#### Acute toxicity
Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

#### Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

#### Serious eye damage/irritation
Direct contact with eyes may cause temporary irritation.

#### Respiratory or skin sensitisation

<table>
<thead>
<tr>
<th>Sensitisation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory sensitisation</strong></td>
<td>Based on available data, the classification criteria are not met. Allergic reactions are possible.</td>
</tr>
<tr>
<td><strong>Skin sensitisation</strong></td>
<td>Based on available data, the classification criteria are not met. Allergic reactions are possible.</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
</tbody>
</table>

#### Carcinogenicity
Due to partial or complete lack of data the classification is not possible.

#### Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

#### Specific target organ toxicity - single exposure
Due to partial or complete lack of data the classification is not possible.

#### Specific target organ toxicity - repeated exposure
Due to partial or complete lack of data the classification is not possible.

#### Aspiration hazard
Not an aspiration hazard.

#### Other information
The antigens included in this product are non-infectious. All have been prepared from attenuated preparations of microorganisms.

### 12. Ecological information

#### Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Avoid release to the environment.

#### Persistence and degradability
No data is available on the degradability of this product.

#### Bioaccumulative potential
No data available.
Mobility in soil

No data available for this product.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods

Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. Do not dispose of waste into sewer. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations.

Residual waste

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

Not established.

15. Regulatory information

Safety, health and environmental regulations

National regulations

This Safety Data Sheet was prepared in accordance with the Australia Model Code of Practice for the preparation of safety data sheets for hazardous chemicals.

Poison Schedule (Product) - Schedule 4

Rhinogard Bovine Herpesvirus 1 Live Intranasal Liquid Vaccine For Cattle: APVMA no. 65951
Rhinogard Bovine Herpesvirus 1 Live Intranasal Vaccine For Feedlot Cattle: APVMA no. 49679

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.
Australia Medicines & Poisons Appendix J
Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 6
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 7
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8
Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9
Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)
Not listed.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)
Not listed.

National Pollutant Inventory (NPI) substance reporting list
Not listed.

Prohibited Carcinogenic Substances
Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)
Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)
Not listed.

Restricted Carcinogenic Substances
Not regulated.

International regulations
Stockholm Convention
Not applicable.

Rotterdam Convention
Not applicable.

Kyoto Protocol
Not applicable.

Montreal Protocol
Not applicable.

Basel Convention
Not applicable.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*“Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date: 01-September-2016
Revision date: 04-February-2021

Disclaimer: Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information: This document has undergone significant changes and should be reviewed in its entirety.