SAFETY DATA SHEET

1. Identification

Product identifier VIBROVAX® VACCINE

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 australia.animalhealth@zoetis.com
Emergency Phone 1800 814 883 (all hours)
Policie 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 In the event of accidental injection, an allergic reaction may occur. This product is an oil-adjuvanted suspension. Oil-adjuvant containing products may cause severe vasospasm following accidental injection.

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>Paraffins (petroleum), normal C5-20</td>
<td>64771-72-8</td>
<td>20-40</td>
</tr>
<tr>
<td>Emulsifier</td>
<td>9049-98-3</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Campylobacter fetus venerealis</td>
<td>Not assigned</td>
<td></td>
</tr>
</tbody>
</table>
4. First-aid measures

Description of necessary first aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Wash off with soap and water. Get medical attention if irritation develops and persists.

Self Injection: In all instances of accidental self injection contact a doctor as soon as possible. Further information on treatment is available from Poisons Information Centre - Phone 131 126. Accidental self injection may lead to an inflammatory response. Medical advice should be sought on the management of deep injections, particularly those near a joint or associated with bruising. Check your tetanus immunisation status.

**Eye contact**
Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion**
Rinse mouth. Do not induce vomiting. Get medical attention if symptoms occur. If ingestion of a large amount does occur, call a poison control centre immediately.

Personal protection for first-aid responders
For personal protection, see section 8 of the SDS. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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.

Symptoms caused by exposure
Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or discomfort. Mild skin irritation.

Medical attention and special treatment
The recommendations following self inoculation for medical management or surgical intervention are as follows: Category 1 injury (superficial skin exposure) Simply wash the contaminated area in warm soapy water. If vaccine material is splashed onto mucosal surfaces (e.g. eyes) there is greater risk and topical corticosteroids should be considered here. Category 2 injury (simple needle-stick injuries without injection) Allow the wound to bleed freely and do not squeeze or interfere with the injection site. Clean the wound thoroughly with soap and water, and keep it clean and dry. Treat symptomatically (e.g. ensure appropriate tetanus cover; prescribe topical corticosteroids and oral antibiotics to prevent opportunistic infection). If unsure whether or not product has been injected, monitor for 24 hours. If pain and swelling subside, injection is unlikely to have occurred. If pain and swelling persist after 24 hours, treatment should be as per Category 3. Category 3 injury (injection of vaccine material) Acute pain and inflammation is usually evident within 24 hours. Perform early surgery and drainage to remove the oil based vaccine material before it spreads or elicits a severe granulomatous reaction. Category 4 injury (lesion that has progressed to necrosis or granulomatous ulceration) Perform surgical debridement to remove any residual vaccine material. Skin grafting may ultimately be required.

5. Fire-fighting measures

Extinguishing media

**Suitable extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for fire fighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Hazchem Code
None.

General fire hazards
No unusual fire or explosion hazards noted.

Specific methods
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. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders

Use personal protection recommended in Section 8 of the SDS. Keep unnecessary personnel away. Ensure adequate ventilation. Ventilate the contaminated area. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Use with adequate ventilation. Wear personal protective equipment. Avoid breathing mist or vapour. Avoid contact with eyes, skin, and clothing. Avoid accidental injection. Handle and open container with care. Observe good industrial hygiene practices. Wash thoroughly after handling. When using, do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Store in cool place. Store at 2-8°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze. Protect from sunlight. Store away from incompatible materials (see Section 10 of the SDS). Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children.

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.

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

Eye/face protection

If contact is likely, safety glasses with side shields are recommended.

Skin protection

Wear appropriate chemical resistant gloves.

Hand protection

Wear suitable protective clothing.

Other

In case of insufficient ventilation, wear suitable respiratory equipment.

Respiratory protection

Not applicable.

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

Physical state: Liquid.

Form: Opaque oil-water emulsion

Colour: Not available.

Odour: Not available.

Odour threshold: Not available.

pH: Not available.

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

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

Flash point: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not applicable.
### Upper/lower flammability or explosive limits

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive limit – upper (%)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Vapour pressure

Not available.

### Vapour density

Not available.

### Relative density

Not available.

### Solubility(ies)

- **Solubility (water)**: Soluble
- **Partition coefficient (n-octanol/water)**: Not available.

### Auto-ignition temperature

Not available.

### Decomposition temperature

Not available.

### Viscosity

Not available.

### Other physical and chemical parameters

- **Explosive properties**: Not explosive.
- **Oxidising properties**: Not oxidising.
- **Specific gravity**: 1.01

### 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**: Contact with incompatible materials.
- **Incompatible materials**: Strong oxidising agents.
- **Hazardous decomposition products**: No hazardous decomposition products are known.

### 11. Toxicological information

#### Information on possible routes of exposure

- **Inhalation**: No adverse effects due to inhalation are expected.
- **Skin contact**: Prolonged skin contact may cause temporary irritation.
- **Eye contact**: Direct contact with eyes may cause temporary irritation.
- **Ingestion**: Expected to be a low ingestion hazard.

#### Symptoms related to exposure

Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or discomfort. Mild skin irritation.

- **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

- **Respiratory sensitisation**: Not a respiratory sensitizer.
- **Skin sensitisation**: This product is not expected to cause skin sensitisation.

#### Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

#### 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

Not classified.
Specific target organ toxicity - repeated exposure  Not classified.

Aspiration hazard  Not an aspiration hazard.

Other information  In the event of accidental injection, an allergic reaction may occur. This product is an oil-adjuvanted suspension. Oil-adjuvant containing products may cause severe vasospasm following accidental injection. 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

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  Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Avoid release to the environment.

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. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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 Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

APVMA No. 52391

This SDS replaces version: Issued October 2015

Australia Medicines & Poisons Appendix E

HYDROCARBONS, LIQUID (CAS 64771-72-8)

Australia Medicines & Poisons Schedule 5

HYDROCARBONS, LIQUID, INCLUDING KEROSENE, DIESEL (DISTILLATE), MINERAL TURPENTINE, WHITE PETROLEUM SPIRIT, TOLUENE, XYLENE AND LIGHT MINERAL AND PARAFFIN OILS (BUT EXCLUDING THEIR DERIVATIVES) (CAS 64771-72-8)

High Volume Industrial Chemicals (HVIC)

Paraffins (petroleum), normal C5-20 (CAS 64771-72-8)  1000 - 9999 TONNES See the regulation for additional information.
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 listed.

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>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>
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<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>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

* A “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
06-December-2016

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.