SAFETY DATA SHEET

1. Identification

Product identifier          Canvac CCi Vaccine
Other means of identification
  Synonyms                  Bordetella bronchiseptica vaccine * Vanguard CCi Injectable Bordetella Vaccine for Dogs

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. In the event of accidental injection, an allergic reaction may occur.

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>Bordetella bronchiseptica</td>
<td>68583-00-6</td>
<td>*</td>
</tr>
</tbody>
</table>

Composition comments
  *Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
4. First-aid measures

Description of necessary first aid measures

**Inhalation**
If inhaled, remove to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
In the case of skin contact, immediately wash the skin with plenty of soap and water. In the event of accidental self injection or needle stick injury, wash the injury thoroughly with clean running water. Get medical attention immediately. If skin irritation or rash occurs: Get medical advice/attention.

**Eye contact**
Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.

**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**
IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Symptoms caused by exposure**
Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort. In the event of accidental injection, an allergic reaction may occur. 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.

**Medical attention and special treatment**
Treat symptomatically.

5. Fire-fighting measures

**Extinguishing media**
- **Suitable extinguishing media**
- **Unsuitable extinguishing media**
  Do not use water jet.

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

**Special protective equipment and precautions for firefighters**
Firefighters should wear full protective clothing including self contained breathing apparatus.

**Fire fighting equipment/instructions**
During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

**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.

**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**
Avoid accidental injection. 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 2-8°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
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
Wear protective gloves.

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

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

Respiratory protection
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
Aqueous solution.

Colour
White.

Odour
None.

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)
Not applicable.

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/68F

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>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosive properties</td>
<td>Not explosive.</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidising.</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.01 estimated</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

Inhalation                       Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact                     Prolonged skin contact may cause temporary irritation.

Eye contact                      Direct contact with eyes may cause temporary irritation.

Ingestion                        Health injuries are not known or expected under normal use.

Symptoms related to exposure     Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort. In the event of accidental injection, an allergic reaction may occur. 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

Respiratory sensitisation       Due to partial or complete lack of data the classification is not possible. In the event of accidental injection, an allergic reaction may occur.

Skin sensitisation              Due to partial or complete lack of data the classification is not possible. In the event of accidental injection, an allergic reaction may occur.

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

12. Ecological information

Ecotoxicity                      Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible. 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 for this product.
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 dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. 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.

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 Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals.

APVMA Number: 55685
Poison Schedule (Product): Schedule 0

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>
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</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
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</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
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</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>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<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>

*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**
26-August-2016

**Revision date**
17-May-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.