SAFETY DATA SHEET

1. Identification

Product identifier: Canine Distemper-Adenovirus Type 2-Parainfluenza-Parvovirus Vaccine, Modified Live Virus

Other means of identification:
- VANGUARD® Plus 5
- Vanguard DAPP
- Vanguard C4 Injectable Vaccine for Dogs
- Vanguard DA2PI-CPV
- Vanguard Plus 5
- Vanguard Puppy
- Enduracell DA2P Parvo
- Enduracell DA2PI Parvo vaccine
- Vanguard DA2PI-CPV (EU)
- Vanguard Plus Puppy
- Vanguard Puppy 5

Synonyms: Veterinary vaccine

Recommended use: Not for human use

Manufacturer/Importer/Supplier/Distributor information:
- Company Name (US): Zoetis Inc.
  10 Sylvan Way
  Parsippany, New Jersey 07054 (USA)
  1-866-531-8896

- Rocky Mountain Poison and Drug Center
  Product Support/Technical Services
  Emergency telephone numbers
  CHEMTREC (24 hours): 1-800-424-9300

- Company Name (EU): Zoetis Belgium S.A.
  Rue Laid Burniat 1
  1348 Louvain-la-Neuve
  Belgium
  Telephone: +32 10 808080
  Emergency telephone number
  International CHEMTREC (24 hours): +1-703-527-3887
  Contact E-Mail: VMIPSrecords@zoetis.com

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Not classified.

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements:
- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The mixture does not meet the criteria for classification.

Precautionary statement:
- 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.

Hazard(s) not otherwise classified (HNOC): 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

Mixtures:

Material name: Canine Distemper-Adenovirus Type 2-Parainfluenza-Parvovirus Vaccine, Modified Live Virus

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### 4. First-aid measures

**Inhalation**
Move 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.

**Eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses, if present and easy to do.

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

**Most important symptoms/effects, acute and delayed**
Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or 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.

**Indication of immediate medical attention and special treatment needed**
Treat symptomatically.

### General information
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.

### 5. Fire-fighting measures

**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 firefighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
Use water spray to cool unopened containers.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**
No unusual fire or explosion hazards noted.

### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**
Large Spills: Stop the flow of material, if this is without risk. Cover with plastic sheet to prevent spreading. 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.

**Environmental precautions**
Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage

Precautions for safe handling: Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Avoid accidental injection. Wash thoroughly after handling. When using, do not eat, drink or smoke. Wear personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store away from direct sunlight. @ 2 - 7°C (36 - 45°F). Do not freeze. Store in original tightly closed container. Keep away from heat, sparks and open flame. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits: This mixture has no ingredients that have PEL, TLV, or other recommended exposure limit.

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

Control banding approach: Gentamicin: Zoetis OEB 2 (control exposure to the range of 100ug/m3 to < 1000ug/m3)

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. Keep air contamination levels below the exposure limits or within the OEB range listed above in this section. General ventilation normally adequate.

Individual protection measures, such as personal protective equipment:

Eye/face protection: If contact is likely, safety glasses with side shields are recommended.

Skin protection:

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

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

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

Thermal hazards: Not applicable.

General hygiene considerations: 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: Freeze-dried preparation plus sterile diluent

Physical state: Solid, Liquid.

Form: Solid, Liquid.

Color: Not available.

Odor: Not available.

Odor threshold: Not available.

pH: 6 - 8

Melting point/freezing point: Not available.

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

Flash point: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

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.

Vapor pressure: Not available.

Vapor 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 information
Explosive properties Not explosive.
Oxidizing properties Not oxidizing.
Specific gravity 0.8 - 1.2

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. Sunlight. High temperatures. Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze.
Incompatible materials Strong oxidizing agents. This material can be denatured or inactivated by a variety of organic solvents, salts or heavy metals.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information
Information on likely 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.
Species: Rabbit
Severity: Non-irritating
Gentamicin

Ingestion Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation. Exposure may cause temporary irritation, redness, or 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.

Information on toxicological effects
Acute toxicity Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components Gentamicin (CAS 1403-66-3)

<table>
<thead>
<tr>
<th>Test Results</th>
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<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gentamicin</td>
<td>Intramuscular</td>
<td>LD50 Mouse 167 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td>LD50 Rat 463 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Subcutaneous</td>
<td>LD50 Rat 6600 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Subcutaneous</td>
<td>LD50 Rat 710 mg/kg</td>
</tr>
</tbody>
</table>

Material name: Canine Distemper-Adenovirus Type 2-Parainfluenza-Parvovirus Vaccine, Modified Live Virus
Version #: 06 Revision date: 09-14-2021 Issue date: 10-14-2013
Direct contact with eyes may cause temporary irritation.

**Eye Contact**

**Gentamicin**

Species: Rabbit
Severity: Non-irritating

**Respiratory or skin sensitization**

**Respiratory sensitization**

Based on available data, the classification criteria are not met. In the event of accidental injection, an allergic reaction may occur.

**Skin sensitization**

Based on available data, the classification criteria are not met. In the event of accidental injection, an allergic reaction may occur.

**Germ cell mutagenicity**

Due to partial or complete lack of data the classification is not possible. No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

**Reproductive toxicity**

Based on available data, the classification criteria are not met. This product is not expected to cause reproductive or developmental effects.

**Developmental effects**

**Species:** Gentamicin

**Result:** LOAEL

Species: Rat

Organ: Intramuscular

75 mg/kg/day Embryo / Fetal Development, Developmental toxicity

**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.

**Further information**

The antigens included in this product are non-infectious. All have been prepared from modified or inactivated 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. Not expected to bioaccumulate.

**Mobility in soil**

No data available.

**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 instructions**

Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. 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.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

None known.
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).

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

14. Transport information

DOT
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 applicable.

15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

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>
</tbody>
</table>
Country(s) or region | Inventory name                                                                 | On inventory (yes/no)* |
---------------------|---------------------------------------------------------------------------------|------------------------|
Europe              | European List of Notified Chemical Substances (ELINCS)                          | No                     |
Japan               | Inventory of Existing and New Chemical Substances (ENCS)                        | No                     |
Korea               | Existing Chemicals List (ECL)                                                   | No                     |
New Zealand         | New Zealand Inventory                                                           | No                     |
Philippines         | Philippine Inventory of Chemicals and Chemical Substances (PICCS)               | No                     |
Taiwan              | Taiwan Chemical Substance Inventory (TCSI)                                       | No                     |
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                  | No                     |

*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, including date of preparation or last revision

Issue date          | 10-14-2013
Revision date       | 09-14-2021
Version #           | 06

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

Product and Company Identification: Synonyms
Identification: Recommended restrictions
Exposure controls/personal protection: Respiratory protection
Toxicological information: Chronic effects
Toxicological information: Reproductivity
Toxicological information: Respiratory sensitization
Toxicological information: Ingestion
Toxicological information: Skin contact
Toxicological information: Specific target organ toxicity - repeated exposure
Toxicological information: Specific target organ toxicity - single exposure
Ecological information: Bioaccumulative potential
Regulatory information: California Proposition 65
Regulatory information: US state regulations