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

Product Identifier

Material Name: Porcine Epidemic Diarrhea Vaccine, Killed Virus

Trade Name: Not established

Chemical Family: Mixture

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Veterinary Vaccine
Restrictions on Use: Not for human use

Details of the Supplier of the Safety Data Sheet

Zoetis Inc. 100 Campus Drive, P.O. Box 651 Florham Park, New Jersey 07932 (USA)

Rocky Mountain Poison Control Center Phone: 1-866-531-8896

Product Support/Technical Services Phone: 1-800-366-5288

Zoetis Belgium S.A. Mercuriusstraat 20 1930 Zaventem Belgium

Emergency telephone number:

CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: VMIPSrecords@zoetis.com

Emergency telephone number:

International CHEMTREC (24 hours): +1-703-527-3887

2. HAZARDS IDENTIFICATION

Appearance: Milky, Pinkish white solution

Classification of the Substance or Mixture

GHS - Classification Not classified as hazardous

EU Classification:

EU Indication of danger: Not classified

Label Elements

Signal Word: Not Classified

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

Precautionary Statements: P280 - Wear protective gloves/protective clothing/eye protection/face protection

P262 - Do not get in eyes, on skin, or on clothing

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P264 - Wash hands thoroughly after handling P273 - Avoid release to the environment

Other Hazards

Short Term: May cause respiratory tract irritation. May cause eye irritation . 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.

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Australian Hazard Classification

(NOHSC):

Non-Hazardous Substance. Non-Dangerous Goods.

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous

| iazardous | | | | | | | | |
|--------------------------|------------|-----------------------|-------------------|--------------------|----|--------------------|------------|-----------|
| Ingredient | CAS Number | EU | EU Classification | GHS | % | | | |
| | | EINECS/ELINCS List | | Classification | | | | |
| | | | | | | Aluminum hydroxide | 21645-51-2 | 244-492-7 |
| Mineral oil, white | 8042-47-5 | 232-455-8 | Not Listed | Not Listed | 1 | | | |
| Merthiolate (as mercury) | 54-64-8 | 200-210-4 | T+; R26/27/28 | Acute Tox. 2 | ## | | | |
| | | | R33 | (H330) | | | | |
| | | | N; R50/53 | Acute Tox. 2 | | | | |
| | | | | (H310) | | | | |
| | | | | Acute Tox. 1 | | | | |
| | | | | (H300) | | | | |
| | | | | STOT RE 2 (H373) | | | | |
| | | | | Aq. Acute 1 (H400) | | | | |
| | | | | Aq. Chronic 1 | | | | |
| | | | | (H410) | | | | |
| Gentamicin | 1403-66-3 | 215-765-8 | Not Listed | Not Listed | ## | | | |

| Ingredient | CAS Number | EU | EU Classification | GHS | % |
|------------------------------------|--------------|---------------|-------------------|----------------|----|
| | | EINECS/ELINCS | | Classification | |
| | | List | | | |
| Porcine Epidemic Diarrhea Vaccine, | Not assigned | Not Listed | Not Listed | Not Listed | * |
| Killed Virus | _ | | | | |
| Polysorbate 80 | 9005-65-6 | Not Listed | Not Listed | Not Listed | * |
| Sorbitan oleate | 1338-43-8 | 215-665-4 | Not Listed | Not Listed | <5 |

Additional Information: ## Trace

* Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace

safety.

For the full text of the R phrases and CLP/GHS abbreviations mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of First Aid Measures

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention

immediately.

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek

medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not

induce vomiting unless directed by medical personnel. Seek medical attention immediately.

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Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms and Effects of For information on potential signs and symptoms of exposure, See Section 2 - Hazards

Exposure: Identification and/or Section 11 - Toxicological Information.

Medical Conditions None known

Aggravated by Exposure:

Indication of the Immediate Medical Attention and Special Treatment Needed

Notes to Physician: None

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Extinguish fires with CO2, extinguishing powder, foam, or water.

Special Hazards Arising from the Substance or Mixture

Hazardous Combustion Formation of toxic gases is possible during heating or fire.

Products:

Fire / Explosion Hazards: Not flammable.

Advice for Fire-Fighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

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

Environmental Precautions

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

Methods and Material for Containment and Cleaning Up

Measures for Cleaning / Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill

Collecting: area thoroughly.

Additional Consideration for Non-essential personnel should be evacuated from affected area. Report emergency

Large Spills: situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling

When handling, use appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Avoid breathing dust, vapor or mist. Avoid accidental injection. Wash thoroughly after handling. Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Keep tightly closed in a dry, cool and well-ventilated place. Protect from light and freezing.

Storage Temperature: 2-7°C. Do not freeze. Specific end use(s): Veterinary Vaccine

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Refer to available public information for specific member state Occupational Exposure Limits.

Aluminum hydroxide

ACGIH Threshold Limit Value (TWA) 1 mg/m³ Austria OEL - MAKs 5 mg/m³ Germany (DFG) - MAK 4 mg/m³ 1.5 mg/m³ 6 mg/m³ Latvia OEL - TWA Lithuania OEL - TWA 6 mg/m³ Poland OEL - TWA 2.5 mg/m3 1.2 mg/m³ Slovakia OEL - TWA 1.5 mg/m³ 3 mg/m³ Switzerland OEL -TWAs

Mineral oil, white

ACGIH Threshold Limit Value (TWA) 5 mg/m³

ACGIH Threshold Limit Value (STEL) 10 mg/m³ (oil mist)

Gentamicin

Bulgaria OEL - TWA 0.1 mg/m³

The purpose of the Occupational Exposure Band (OEB) classification system is to separate substances into different Hazard categories when the available data are sufficient to do so, but inadequate to establish an Occupational Exposure Limit (OEL). The OEB given is based upon an analysis of all currently available data; as such, this value may be subject to revision when new information becomes available.

Gentamicin

Zoetis OEB OEB 2 (control exposure to the range of 100ug/m³ to < 1000ug/m³)

Exposure Controls

Engineering Controls: Engineering controls should be used as the primary means to control exposures. Keep air

contamination levels below the exposure limits or within the OEB range listed above in this section. General room ventilation is adequate unless the process generates dust, mist or

aerosols.

Personal Protective

Equipment:

Refer to applicable national standards and regulations in the selection and use of personal

protective equipment (PPE).

Hands: Wear impervious gloves if skin contact is possible. **Eyes:** Wear safety glasses or goggles if eye contact is possible.

Skin: Impervious protective clothing is recommended if skin contact with drug product is possible and

for bulk processing operations.

Respiratory protection: Under normal conditions of use, respiratory protection is not expected to be necessary.

Whenever air contamination (mist, vapor or odor) is generated, respiratory protection is recommended as a precaution to minimize exposure. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to

control exposures to below the OEL. If airborne exposures are within or exceed the

Occupational Exposure Band (OEB) range, wear an appropriate respirator with a protection

factor sufficient to control exposures to the bottom of the OEB range.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:LiquidColor:Pinkish whiteOdor:No data available.Odor Threshold:No data available.

Molecular Formula: Mixture Molecular Weight: Mixture

Solvent Solubility: No data available

Water Solubility: Soluble

pH: No data available.

Melting/Freezing Point (°C):

Boiling Point (°C):No data available.
Partition Coefficient: (Method, pH, Endpoint, Value)

No data available

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s):

Vapor Pressure (kPa):

Vapor Density (g/ml):

Relative Density:

No data available

Flammablity:

Autoignition Temperature (Solid) (°C):

No data available
Flammability (Solids):

No data available

Flash Point (Liquid) (°C):

Upper Explosive Limits (Liquid) (% by Vol.):

Lower Explosive Limits (Liquid) (% by Vol.):

Polymerization:

No data available
No data available
Will not occur

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under normal conditions of use.

Possibility of Hazardous Reactions

Oxidizing Properties: No data available

Conditions to Avoid: Fine particles (such as dust and mists) may fuel fires/explosions. **Incompatible Materials:** As a precautionary measure, keep away from strong oxidizers

Hazardous Decomposition No data available

Products:

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

General Information: Toxicological properties of the formulation have not been investigated. The following

information is available for the individual ingredients. The antigens included in this product are

non-infectious. All have been prepared from killed or inactivated preparations of

microorganisms.

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

Merthiolate (as mercury)

Rat Oral LD50 75 mg/kg

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11. TOXICOLOGICAL INFORMATION

Rat Subcutaneous LD50 98mg/kg

Mineral oil, white

Rat Oral LD50 > 5000 mg/kg

Polysorbate 80

Rat Intravenous LD 50 1790 mg/kg

Mouse Oral LD 50 25g/kg

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

Merthiolate (as mercury)
Eye Irritation Rabbit Mild

Mineral oil, white

Skin Irritation Rabbit Slight Eye Irritation Rabbit Slight

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

12. ECOLOGICAL INFORMATION

Environmental Overview: Environmental properties have not been investigated. This product contains trace quantities of

mercury, releases to the environment should be avoided.

Toxicity: No data available

Persistence and Degradability: No data available

Bio-accumulative Potential: No data available

Mobility in Soil: No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. 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. 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).

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14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

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

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

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.

Porcine Epidemic Diarrhea Vaccine, Killed Virus

CERCLA/SARA 313 Emission reporting

California Proposition 65

EU EINECS/ELINCS List

Not Listed

Not Listed

Aluminum hydroxide

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Not Listed

Not Listed

Not Listed

Not Listed

Not Listed

Not Eisted

Not Listed

Not

Mineral oil, white

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

232-455-8

Merthiolate (as mercury)

CERCLA/SARA 313 Emission reporting Not Listed

California Proposition 65 developmental toxicity initial date 7/1/90

Inventory - United States TSCA - Sect. 8(b) Present Australia (AICS): Present

REACH - Annex XVII - Restrictions on CertainUse restricted. See item 18.

Dangerous Substances:

EU EINECS/ELINCS List 200-210-4

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15. REGULATORY INFORMATION

Gentamicin

CERCLA/SARA 313 Emission reporting Not Listed

California Proposition 65 developmental toxicity initial date 10/1/92

Australia (AICS): Present
Standard for the Uniform Scheduling Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List 215-765-8

Polysorbate 80

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

Present

EU EINECS/ELINCS List

Not Listed

Sorbitan oleate

CERCLA/SARA 313 Emission reporting

California Proposition 65

Inventory - United States TSCA - Sect. 8(b)

Australia (AICS):

REACH - Annex IV - Exemptions from the

Not Listed

Not Listed

Not Listed

Not Listed

Present

obligations of Register:

EU EINECS/ELINCS List 215-665-4

16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3

Acute toxicity, inhalation-Cat.2; H330 - Fatal if inhaled

Acute toxicity, dermal-Cat.1; H310 - Fatal in contact with skin

Acute toxicity, oral-Cat.2; H300 - Fatal if swallowed

Specific target organ toxicity, repeated exposure-Cat.2; H373 - May cause damage to organs through prolonged or repeated exposure

Hazardous to the aquatic environment, acute toxicity-Cat.1; H400 - Very toxic to aquatic life

Hazardous to the aquatic environment, chronic toxicity-Cat 1; H410 - Very toxic to aquatic life with long lasting effects

T+ - Very toxic

N - Dangerous for the environment

R33 - Danger of cumulative effects.

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Data Sources: The data contained in this MSDS may have been gathered from confidential internal sources,

raw material suppliers, or from the published literature.

Reasons for Revision: New data sheet.

Prepared by: Toxicology and Hazard Communication

Zoetis Global Risk Management

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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.

End of Safety Data Sheet