

Revision date: 30-Apr-2015

Version: 2.5

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

Product Identifier

Material Name: OrbeSeal®

| Teat Seal |
|--------------------|
| OrbeSeal, Teatseal |
| Mixture |
| |

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

Intended Use: Restrictions on Use: Veterinary product used as Non-antibiotic intramammary dry cow treatment Not for human use

Details of the Supplier of the Safety Data Sheet

Zoetis Inc.Zoetis B100 Campus Drive, P.O. Box 651MercuriuFlorham Park, New Jersey 07932 (USA)1930 ZavRocky Mountain Poison and Drug Center Phone: 1-866-531-8896BelgiumProduct Support/Technical Services Phone: 1-800-366-5288Belgium

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

Zoetis Belgium S.A. Mercuriusstraat 20 1930 Zaventem Belgium

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

2. HAZARDS IDENTIFICATION

| Δn | pea | ran | Ce. |
|------|-----|-----|-----|
| / YP | pou | | |

Grayish white viscous oily paste with a paraffin odor in a disposable syringe

Classification of the Substance or Mixture GHS - Classification

- Classification

Acute Oral Toxicity: Category 4

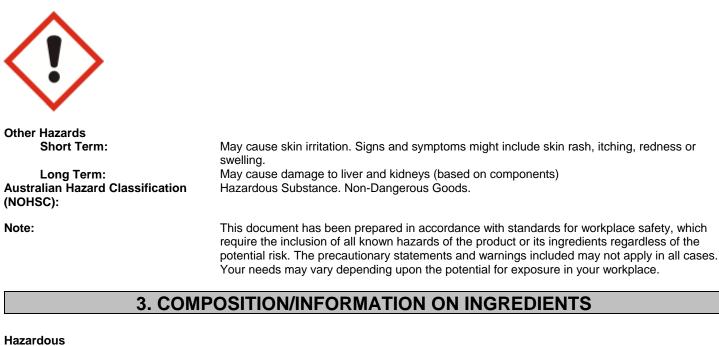
EU Classification:

EU Symbol: Harmful; (Xn) EU Risk Phrases:

R22 - Harmful if swallowed.

Label Elements

| Signal Word: | Warning |
|---------------------------|---|
| Hazard Statements: | H302 - Harmful if swallowed |
| Precautionary Statements: | P264 - Wash hands thoroughly after handling P270 - Do not eat, drink or smoke when using this product P301+ P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell P330 - Rinse mouth P501 - Dispose of contents/container in accordance with all local and national regulations |



| Ingredient | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification | % |
|---------------------------|------------|-----------------------------|-------------------|------------------------|------|
| Bismuth subnitrate | 1304-85-4 | 215-136-8 | Xn; R22 | Acute Tox. 4 (H302) | 65 |
| Liquid paraffin | 92062-35-6 | 295-550-3 | Not Listed | Not Listed | < 30 |
| Colloidal silicon dioxide | 7631-86-9 | 231-545-4 | Not Listed | Not Listed | 1 |

| Ingredient | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification | % |
|---|--------------|-----------------------------|-------------------|-----------------------|---|
| Aluminum di-/tristearate (ALUGEL 30 HEP) | NOT ASSIGNED | Not Listed | Not Listed | Not Listed | * |

Additional Information:

* Proprietary

Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety. In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

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: | Immediately flush eyes with water for at least 15 minutes. If irritation occurs or persists, get medical attention. |
|---|--|
| Skin Contact: | Remove contaminated clothing and shoes. Wash skin with soap and water. This material may not be completely removed by conventional laundering. Consult professional laundry service. Do not home launder. If irritation occurs or persists, get medical attention. |

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|---|---|
| Ingestion: | Do not induce vomiting unless directed by medical personnel. Never give anything by mouth an unconscious person. Get medical attention. |
| Inhalation: | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately. |
| Most Important Symptoms and Effect Symptoms and Effects of Exposure: Medical Conditions Aggravated by Exposure: | ets, Both Acute and Delayed For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information. None known |
| ndication of the Immediate Medical Notes to Physician: | Attention and Special Treatment Needed None |
| | 5. FIRE-FIGHTING MEASURES |
| Extinguishing Media: | Carbon dioxide, dry powder, or foam. |
| Special Hazards Arising from the Su Hazardous Combustion Products: | bstance or Mixture Carbon dioxide, carbon monoxide, and oxides of nitrogen |
| Fire / Explosion Hazards: | Fine particles (such as dust and mists) may fuel fires/explosions. |
| Advice for Fire-Fighters Evacuate area and fight fire from protective turn out gear. | ${\mathfrak n}$ a safe distance. Wear approved positive pressure, self-contained breathing apparatus and fu |
| Additional Information: | This product contains an oxidizer and may support combustion. Paraffin is combustible. |
| 6. | ACCIDENTAL RELEASE MEASURES |
| Personnel involved in clean-up s | uipment and Emergency Procedures hould wear appropriate personal protective equipment (see Section 8). Minimize exposure. abeled, sealed container for disposal. Care should be taken to avoid environmental release. |
| Methods and Material for Containme Measures for Cleaning / Collecting: | nt and Cleaning Up Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean s area thoroughly. |
| Additional Consideration for Large Spills: | Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel |
| | 7. HANDLING AND STORAGE |
| | personal protective equipment (see Section 8). Use with adequate ventilation. Keep away from contact with eyes, skin and clothing. Wash thoroughly after handling. Releases to the |

 Conditions for Safe Storage, Including any Incompatibilities

 Storage Conditions:
 Store in a cool, dry, well-ventilated area. Protect from light. Keep away from heat, sparks, and flames. Keep container tightly closed when not in use.

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Storage Temperature: Incompatible Materials: Specific end use(s): Store as directed by product packaging. Strong oxidizing agents and strong acids , organic materials , combustible materials No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

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

| Colloidal silicon dioxide | |
|--|-----------------------|
| Australia TWA | 2 mg/m ³ |
| Austria OEL - MAKs | 4 mg/m ³ |
| | 0.3 mg/m ³ |
| Czech Republic OEL - TWA | 0.1 mg/m ³ |
| | 4.0 mg/m ³ |
| Estonia OEL - TWA | 2 mg/m ³ |
| Finland OEL - TWA | 5 mg/m³ |
| Germany - TRGS 900 - TWAs | 4 mg/m ³ |
| Germany (DFG) - MAK | 4 mg/m ³ |
| Ireland OEL - TWAs | 6 mg/m ³ |
| | 2.4 mg/m ³ |
| Latvia OEL - TWA | 1 mg/m ³ |
| OSHA - Final PELs - Table Z-3 Mineral D: | 20 mppcf |
| | Listed |
| Slovakia OEL - TWA | 4.0 mg/m ³ |
| Switzerland OEL -TWAs | 4 mg/m ³ |
| | 0.3 mg/m ³ |

The exposure limit(s) listed for solid components are only relevant if dust or mist may be generated.

| Exposure Controls | |
|-------------------------|--|
| Engineering Controls: | Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or aerosols. |
| Personal Protective | Refer to applicable national standards and regulations in the selection and use of personal |
| Equipment: | protective equipment (PPE). |
| Hands: | Chemical protective gloves |
| Eyes: | Wear safety glasses or goggles if eye contact is possible. |
| Skin: | Wear protective clothing when working with large quantities. |
| Respiratory protection: | Respiratory protection is recommended as a precaution to minimize exposure when handling this material in bulk. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Physical State: | Smooth Oily Paste | Color: | Grayish White |
|---|---|-------------------|--------------------|
| Odor: | Paraffin odor | Odor Threshold: | No data available. |
| Molecular Formula: | Mixture | Molecular Weight: | Mixture |
| Solvent Solubility: Water Solubility: Solubility: pH: Melting/Freezing Point (°C): Boiling Point (°C): Partition Coefficient: (Method, pH, E No data available | No data available No data available Insoluble: Water (based on component No data available. 260 based on highest component melt No data available. Endpoint, Value) | , | te) |

9. PHYSICAL AND CHEMICAL PROPERTIES

Decomposition Temperature (°C): No data available.

Evaporation Rate (Gram/s): Vapor Pressure (kPa): Vapor Density (g/ml): Relative Density: Viscosity: No data available No data available No data available 4.93 (Bismuth subnitrate) No data available

Flammablity:

Autoignition Temperature (Solid) (°C): Flammability (Solids): Flash Point (Liquid) (°C): Upper Explosive Limits (Liquid) (% by Vol.): Lower Explosive Limits (Liquid) (% by Vol.): Polymerization: Additional Information: No data available No data available 179 based on lowest component boiling point (Paraffin) No data available No data available Will not occur There are no data available for this mixture. The information given in this section is for major component(s).

10. STABILITY AND REACTIVITY

Reactivity: Chemical Stability: Possibility of Hazardous Reactions Oxidizing Properties: Conditions to Avoid:

No data available Stable

Bismuth subnitrate is an oxidizer. Keep away from heat, spark, flames and all other sources of ignition. Avoid prolonged exposure to higher temperatures and/or direct sunlight. Strong oxidizing agents and strong acids , organic materials , combustible materials Toxic or corrosive oxides of carbon and nitrogen.

Incompatible Materials: Hazardous Decomposition Products:

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

General Information:

Toxicological properties of the formulation have not been investigated. The information in this section describes the potential hazards of the individual ingredients and the formulation. Routes of exposure: skin contact

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

Bismuth subnitrate Mouse Oral Minimum Lethal Dose 1200 mg/kg

Ingestion Acute ToxicityHarmful if swallowed.Skin Irritation / SensitizationMay cause skin irritation.

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

Bismuth subnitrate

3 Day(s) Rabbit Subcutaneous 5 g/kg/day LOAEL Kidney 60-70 Day(s) Rat Oral 5 g/kg/day LOAEL Liver, Kidney,

| | 11. TOXICOLOGICAL INFORMATION |
|---|--|
| Subchronic Effects | Single or multiple subcutaneous injections of bismuth subnitrate into female mice produced neurological signs including ataxia, tremors, and convulsions. Hydrocephalus and axonal swelling in the spinal cord were the major neuropathological lesions. |
| Carcinogen Status: | None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA. See below |
| Colloidal silicon dioxide IARC: | Group 3 (Not Classifiable) |
| Product Level Toxicity Data Acute Toxicity Estimate (ATE), dermal | ca. 1851 mg/kg |
| | 12. ECOLOGICAL INFORMATION |

| Environmental Overview: | The environmental characteristics of this material have not been fully evaluated. 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.

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.

Canada - WHMIS: Classifications

15. REGULATORY INFORMATION

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

| WHMIS hazard class: Non-controlled This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR. | |
|---|------------|
| Bismuth subnitrate | |
| CERCLA/SARA 313 Emission reporting | Not Listed |
| California Proposition 65 | Not Listed |
| Inventory - United States TSCA - Sect. 8(b) | Present |
| Australia (AICS): | Present |
| EU EINECS/ELINCS List | 215-136-8 |
| Liquid paraffin | |
| CERCLA/SARA 313 Emission reporting | Not Listed |
| California Proposition 65 | Not Listed |
| Australia (AICS): | Present |
| EU EINECS/ELINCS List | 295-550-3 |
| Colloidal silicon dioxide | |
| CERCLA/SARA 313 Emission reporting | Not Listed |
| California Proposition 65 | Not Listed |
| Inventory - United States TSCA - Sect. 8(b) | Present |
| Australia (AICS): | Present |
| EU EINECS/ELINCS List | 231-545-4 |
| Aluminum di-/tristearate (ALUGEL 30 HEP) | |

Aluminum di-/tristearate (ALUGEL 30 HEP) **CERCLA/SARA 313 Emission reporting California Proposition 65 EU EINECS/ELINCS List**

16. OTHER INFORMATION

Not Listed

Not Listed

Not Listed

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

Acute toxicity, oral-Cat.4; H302 - Harmful if swallowed

Xn - Harmful

R22 - Harmful if swallowed.

Data Sources:

The data contained in this SDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.

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| | |

| Reasons for Revision: | Updated Section 2 - Hazard Identification. Updated Section 11 - Toxicology Information. |
|-----------------------|---|
| Prepared by: | Toxicology and Hazard Communication Zoetis Global Risk Management |

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