

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

078465837

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

078418295 078465845

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

078036801 078189578

# SAFETY DATA SHEET



Revision date: 17-Apr-2014

Version: 2.0

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

### Product Identifier

**Material Name:** Tetanus Toxoid

**Trade Name:** Tetanus Toxoid

**Chemical Family:** Not determined

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

**Intended Use:** Veterinary Vaccine

### 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:** Cloudy white suspension

### 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.

### Other Hazards

**Short Term:** 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.

### 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.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous

| Ingredient   | CAS Number | EU EINECS/ELINCS List | EU Classification                                | GHS Classification  | %    |
|--------------|------------|-----------------------|--|---|------|
| Thimerosal   | 54-64-8    | 200-210-4             | T+; R26/27/28;<br>R33<br>N; R50/53               | Acute Tox. 2 (H300)<br>Acute Tox. 1 (H310)<br>STOT RE 2 (H373)<br>Acute Tox. 2 (H330)<br>Acute Aquatic 1 (H400)<br>Chronic Aquatic 1 (H410) | <0.1 |
| Polymyxin B  | 1404-26-8  | 215-768-4             | Xn;R22<br>Xn;R42/43                              | Acute Tox. 4 (H302)<br>Skin Sens. 1 (H317)<br>Resp Sens. 1 (H334)   | <0.1 |
| Formaldehyde | 50-00-0    | 200-001-8             | T; R23/24/25<br>C; R34<br>Carc.Cat.3; R40<br>R43 | Acute Tox. 3 (H301)<br>Skin Corr. 1B (H314)<br>Skin Sens. 1 (H317)<br>Carc. 1A (H350)<br>Acute Tox. 3 (H331)                                | <0.1 |

| Ingredient         | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification | % |
|--------------------|------------|-----------------------|-------------------|--------------------|---|
| Polysorbate 80     | 9005-65-6  | Not Listed            | Not Listed        | Not Listed         | * |
| Tetanus toxoid     | 93384-51-1 | 297-262-3             | Not Listed        | Not Listed         | * |
| Neomycin Free Base | 1404-04-2  | 215-766-3             | Not Listed        | Not Listed         | * |

#### Additional Information:

\* 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.

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**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.

**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 Exposure:** For information on potential signs and symptoms of exposure, See Section 2 - Hazards 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 Products:** Formation of toxic gases is possible during heating or fire.

**Fire / Explosion Hazards:** Fine particles (such as dust and mists) may fuel fires/explosions.

### 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 / Collecting:** Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill 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

### Precautions for Safe Handling

Minimize generating airborne mists and vapors. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). 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. Keep away from heat, sparks, and flame. Avoid accidental injection.

### Conditions for Safe Storage, Including any Incompatibilities

**Storage Conditions:** Store as directed by product packaging.

**Incompatible Materials:** This material can be denatured or inactivated by a variety of organic solvents, salts or heavy metals.

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Specific end use(s): No data available

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control Parameters

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

#### Formaldehyde

|   |   |
|---|---|
| ACGIH Ceiling Threshold Limit:          | 0.3 ppm   |
| ACGIH - Sensitizer Designation          | Sensitizer  |
| Australia STEL                          | 2 ppm   |
| Australia TWA                           | 2.5 mg/m <sup>3</sup>   |
| Austria OEL - MAKs                      | 1 ppm   |
| Bulgaria OEL - TWA                      | 1.2 mg/m <sup>3</sup>   |
| Czech Republic OEL - TWA                | 0.5 ppm   |
| Estonia OEL - TWA                       | 0.6 mg/m <sup>3</sup>   |
| Finland OEL - TWA                       | 0.3 ppm   |
| France OEL - TWA                        | 0.37 mg/m <sup>3</sup>  |
| Germany (DFG) - MAK                     | 0.5 ppm   |
| Greece OEL - TWA                        | 0.37 mg/m <sup>3</sup> no irritation should occur during mixed exposure |
| Hungary OEL - TWA                       | 2 ppm   |
| Ireland OEL - TWAs                      | 2.5 mg/m <sup>3</sup>   |
| Japan - OELs - Ceilings                 | 0.6 mg/m <sup>3</sup>   |
| Latvia OEL - TWA                        | 2 ppm   |
| Lithuania OEL - TWA                     | 2.5 mg/m <sup>3</sup>   |
| Netherlands OEL - TWA                   | 0.2 ppm   |
| Vietnam OEL - TWAs                      | 0.24 mg/m <sup>3</sup>  |
| OSHA - Final PELs - TWAs:               | 0.5 mg/m <sup>3</sup>   |
| OSHA - Specifically Regulated Chemicals | 0.5 ppm   |
| Poland OEL - TWA                        | 0.75 ppm  |
| Romania OEL - TWA                       | 0.5 mg/m <sup>3</sup>   |
| Slovakia OEL - TWA                      | 1 ppm   |
| Slovenia OEL - TWA                      | 1.20 mg/m <sup>3</sup>  |
| Sweden OEL - TWAs                       | 0.3 ppm   |
| Switzerland OEL - TWAs                  | 0.37 mg/m <sup>3</sup>  |

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

#### Polymyxin B

##### Zoetis OEB

OEB 2 - Sensitizer (control exposure to the range of 100ug/m<sup>3</sup> to < 1000ug/m<sup>3</sup>, provide additional precautions to protect from skin contact)

#### Exposure Controls

##### Engineering Controls:

Engineering controls should be used as the primary means to control exposures. Use process containment, local exhaust ventilation, or other engineering controls to maintain airborne levels within the OEB range.

##### 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:

Safety glasses or goggles

##### Skin:

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

##### Respiratory protection:

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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical State:

Suspension

#### Odor:

No data available.

#### Molecular Formula:

Mixture

#### Color:

Cloudy white

#### Odor Threshold:

No data available.

#### Molecular Weight:

Mixture

#### Solvent Solubility:

No data available

#### Water Solubility:

No data available

#### Solubility:

Soluble: Water, methanol,

#### pH:

6-8

#### Melting/Freezing Point (°C):

No data available

#### 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):

No data available

#### Vapor Pressure (kPa):

No data available

#### Vapor Density (g/ml):

No data available

#### Relative Density:

No data available

#### Viscosity:

No data available

#### Flammability:

##### Autoignition Temperature (Solid) (°C):

No data available

##### Flammability (Solids):

No data available

##### Flash Point (Liquid) (°C):

Non-flammable

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

No data available

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

No data available

#### Polymerization:

Will not occur

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### 10. STABILITY AND REACTIVITY

|   |  |
|---|--|
| <b>Reactivity:</b>                        | No data available  |
| <b>Chemical Stability:</b>                | Stable under normal conditions of use.   |
| <b>Possibility of Hazardous Reactions</b> |  |
| <b>Oxidizing Properties:</b>              | No data available  |
| <b>Conditions to Avoid:</b>               | Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze. |
| <b>Incompatible Materials:</b>            | This material can be denatured or inactivated by a variety of organic solvents, salts or heavy metals. |
| <b>Hazardous Decomposition Products:</b>  | No data available  |

### 11. TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects

**General Information:** The antigens included in this product are non-infectious. All have been prepared from killed or inactivated preparations of microorganisms. The information included in this section describes the potential hazards of the individual ingredients.

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

##### Thimerosal

Rat Oral LD50 75 mg/kg  
Mouse Oral LD50 91 mg/kg  
Rat Subcutaneous LD50 98mg/kg

##### Polysorbate 80

Rat Intravenous LD 50 1790 mg/kg  
Mouse Oral LD 50 25g/kg

##### Polymyxin B

Mouse Oral LD50 790 mg/kg  
Mouse Para-periosteal LD50 3980ug/kg  
Rat Subcutaneous LD50 50mg/kg

##### Formaldehyde

Rat Oral LD50 800 mg/kg

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

##### Thimerosal

Eye Irritation Rabbit Mild

##### Formaldehyde

Eye Irritation Rabbit Severe  
Skin Irritation Rabbit Moderate Severe  
Skin Sensitization Positive

#### **Skin Irritation / Sensitization**

This product contains formaldehyde and merthiolate which are considered to be skin sensitizers.

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### 11. TOXICOLOGICAL INFORMATION

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

##### **Formaldehyde**

90 Day(s) Dog Inhalation Not Specified Lungs  
90 Day(s) Rat Inhalation Not Specified Lungs  
90 Day(s) Monkey Inhalation Not Specified Lungs  
90 Day(s) Rat Inhalation 15 ppm LOAEL Respiratory system

#### Reproduction & Development Toxicity: (Duration, Species, Route, Dose, End Point, Effect(s))

##### **Formaldehyde**

Embryo / Fetal Development Mouse Oral 185 mg/kg/day Not teratogenic, Maternal toxicity  
Embryo / Fetal Development Rat Inhalation 40 ppm Not Teratogenic, Maternal Toxicity

#### Genetic Toxicity: (Study Type, Cell Type/Organism, Result)

##### **Polymyxin B**

*In Vitro* Negative  
*In Vivo* Negative

##### **Formaldehyde**

*In Vitro* Bacterial Mutagenicity (Ames) Bacteria Positive  
*In Vitro* Chromosome Aberration Rodent Positive  
*In Vitro* Sister Chromatid Exchange Rodent Positive  
*In Vivo* Chromosome Aberration Not specified Positive

#### Carcinogenicity: (Duration, Species, Route, Dose, End Point, Effect(s))

##### **Formaldehyde**

2 Year(s) Rat Inhalation 6 ppm LOAEL Tumors  
2 Year(s) Mouse Inhalation 15 ppm LOAEL Tumors

#### Carcinogen Status:

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.

##### **Formaldehyde**

**IARC:** Group 1 (Carcinogenic to Humans)  
**NTP:** Known Human Carcinogen  
**OSHA:** Listed



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### 12. ECOLOGICAL INFORMATION

|                                       |  |
|---------------------------------------|--|
| <b>Environmental Overview:</b>        | The environmental characteristics of this material have not been fully evaluated. Releases to the environment should be avoided. |
| <b>Toxicity:</b>                      | No data available  |
| <b>Persistence and Degradability:</b> | No data available  |
| <b>Bio-accumulative Potential:</b>    | No data available  |
| <b>Mobility in Soil:</b>              | No data available  |

### 13. DISPOSAL CONSIDERATIONS

|                                 |  |
|---------------------------------|--|
| <b>Waste Treatment Methods:</b> | 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). |
|---------------------------------|--|

#### Formaldehyde

RCRA - U Series Wastes

Listed

### 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.

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### 15. REGULATORY INFORMATION

#### Polysorbate 80

|   |            |
|---|------------|
| 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                       | Not Listed |

#### Tetanus toxoid

|   |            |
|---|------------|
| CERCLA/SARA 313 Emission reporting                            | Not Listed |
| California Proposition 65                                     | Not Listed |
| Standard for the Uniform Scheduling<br>for Drugs and Poisons: | Schedule 4 |
| EU EINECS/ELINCS List   | 297-262-3  |

#### Thimerosal

|   |  |
|---|--|
| 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 Certain<br>Dangerous Substances: | Use restricted. See item 18.               |
| EU EINECS/ELINCS List   | 200-210-4                                  |

#### Polymyxin B

|                                    |            |
|------------------------------------|------------|
| CERCLA/SARA 313 Emission reporting | Not Listed |
| California Proposition 65          | Not Listed |
| EU EINECS/ELINCS List              | 215-768-4  |

#### Neomycin Free Base

|   |   |
|---|---|
| CERCLA/SARA 313 Emission reporting                            | Not Listed                                  |
| California Proposition 65                                     | developmental toxicity initial date 10/1/92 |
| Standard for the Uniform Scheduling<br>for Drugs and Poisons: | Schedule 4                                  |
| EU EINECS/ELINCS List   | 215-766-3                                   |

#### Formaldehyde

|   |                                    |
|---|------------------------------------|
| CERCLA/SARA 313 Emission reporting                                    | 0.1 %                              |
| CERCLA/SARA Hazardous Substances<br>and their Reportable Quantities:  | 100 lb                             |
| CERCLA/SARA - Section 302 Extremely Hazardous<br>TPQs                 | 45.4 kg                            |
| CERCLA/SARA - Section 302 Extremely Hazardous<br>Substances EPCRA RQs | 500 lb                             |
| California Proposition 65   | 100 lb                             |
| OSHA - Specifically Regulated Chemicals                               | carcinogen initial date 1/1/88 gas |
|   | 2 ppm                              |
|   | 0.5 ppm                            |
|   | 0.75 ppm                           |
| Inventory - United States TSCA - Sect. 8(b)                           | Present                            |
| Australia (AICS):   | Present                            |

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### 15. REGULATORY INFORMATION

|                                     |            |
|-------------------------------------|------------|
| Standard for the Uniform Scheduling | Schedule 2 |
| for Drugs and Poisons:              | Schedule 6 |
| EU EINECS/ELINCS List               | 200-001-8  |

### 16. OTHER INFORMATION

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

H300 - Fatal if swallowed  
H301 - Toxic if swallowed  
H302 - Harmful if swallowed  
H310 - Fatal in contact with skin  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H330 - Fatal if inhaled  
H331 - Toxic if inhaled  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H350 - May cause cancer  
H373 - May cause damage to organs through prolonged or repeated exposure  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

Carcinogenic: Category 3

T+ - Very toxic

T - Toxic

C - Corrosive

Xn - Harmful

N - Dangerous for the environment

R33 - Danger of cumulative effects.

R34 - Causes burns.

R40 - Limited evidence of a carcinogenic effect

R43 - May cause sensitization by skin contact.

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

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

R42/43 - May cause sensitization by inhalation and skin contact.

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:**

Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking.  
Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on Ingredients. Updated Section 7 - Handling and Storage. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 15 - Regulatory Information. Updated Section 16 - Other 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.

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End of Safety Data Sheet

# SAFETY DATA SHEET



## 1. Identification

|   |   |
|---|---|
| <b>Product identifier</b>                                     | <b>Tetanus Toxoid</b>   |
| <b>Other means of identification</b>                          | None.   |
| <b>Recommended use</b>  | Veterinary vaccine  |
| <b>Recommended restrictions</b>                               | Not for human use   |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |   |
| <b>Company Name (US)</b>                                      | Zoetis Inc.<br>10 Sylvan Way<br>Parsippany, New Jersey 07054 (USA)                        |
| <b>Rocky Mountain Poison and Drug Center</b>                  | 1-866-531-8896  |
| <b>Product Support/Technical Services</b>                     | 1-800-366-5288  |
| <b>Emergency telephone numbers</b>                            | CHEMTREC (24 hours): 1-800-424-9300<br>International CHEMTREC (24 hours): +1-703-527-3887 |
| <b>Company Name (EU)</b>                                      | Zoetis Belgium S.A.<br>Mercuriusstraat 20<br>1930 Zaventem<br>Belgium                     |
| <b>Emergency telephone number</b>                             | International CHEMTREC (24 hours): +1-703-527-3887  |
| <b>Contact E-Mail</b>   | VMIPSrecords@zoetis.com   |

## 2. Hazard(s) identification

|                              |                 |
|------------------------------|-----------------|
| <b>Physical hazards</b>      | Not classified. |
| <b>Health hazards</b>        | Not classified. |
| <b>Environmental hazards</b> | Not classified. |
| <b>OSHA defined hazards</b>  | Not classified. |

### Label elements

|                                |  |
|--------------------------------|--|
| <b>Hazard symbol</b>           | None.  |
| <b>Signal word</b>             | None.  |
| <b>Hazard statement</b>        | The mixture does not meet the criteria for classification.                     |
| <b>Precautionary statement</b> |  |
| <b>Prevention</b>              | Observe good industrial hygiene practices.                                     |
| <b>Response</b>                | Wash hands after handling.   |
| <b>Storage</b>                 | Store away from incompatible materials.  |
| <b>Disposal</b>                | 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. This product is an oil-adjuvanted suspension. Oil-adjuvant containing products may cause severe vasospasm following accidental injection.

## 3. Composition/information on ingredients

### Mixtures

| <b>Chemical name</b> | <b>Common name and synonyms</b> | <b>CAS number</b> | <b>%</b> |
|----------------------|---------------------------------|-------------------|----------|
| Squalene             |                                 | 111-02-4          | <5       |
| Formaldehyde         |                                 | 50-00-0           | <0.1     |

Material name: Tetanus Toxoid

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| Chemical name      | Common name and synonyms | CAS number | %    |
|--------------------|--------------------------|------------|------|
| Neomycin Free Base |                          | 1404-04-2  | <0.1 |
| Polymyxin B        |                          | 1404-26-8  | <0.1 |
| Thimerosal         |                          | 54-64-8    | <0.1 |
| Tetanus toxoid     |                          | 93384-51-1 | *    |

**Composition comments** \* Non-hazardous Ingredients  
In accordance with 29 CFR 1910.1200, the exact percentage composition of this mixture has been withheld as a trade secret.

#### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | Move to fresh air. Call a physician if symptoms develop or persist.   |
| <b>Skin contact</b>   | 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.   |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses, if present and easy to do.  |
| <b>Ingestion</b>  | 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.  |
| <b>Most important symptoms/effects, acute and delayed</b>                     | 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. |
| <b>Indication of immediate medical attention and special treatment needed</b> | Treat symptomatically. Where parenteral oil-adjuvanted vaccine exposure has occurred, the patient should be promptly evaluated for the development of vasospasm and/or compartment syndrome.  |
| <b>General information</b>  | 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

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).                                   |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Move containers from fire area if you can do so without risk.                                 |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

#### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.   |
| <b>Methods and materials for containment and cleaning up</b>               | 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.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. |
| <b>Environmental precautions</b>   | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.<br>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 out of direct sunlight in dark, dry conditions. @ 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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### Zoetis

| Components                         | Type | Value     |
|------------------------------------|------|-----------|
| Neomycin Free Base (CAS 1404-04-2) | TWA  | 100 µg/m3 |

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

| Components                 | Type | Value    |
|----------------------------|------|----------|
| Formaldehyde (CAS 50-00-0) | STEL | 2 ppm    |
|                            | TWA  | 0.75 ppm |

#### US. OSHA Table Z-2 (29 CFR 1910.1000)

| Components               | Type    | Value      |
|--------------------------|---------|------------|
| Thimerosal (CAS 54-64-8) | Ceiling | 0.04 mg/m3 |
|                          | TWA     | 0.01 mg/m3 |

#### US. ACGIH Threshold Limit Values

| Components                 | Type    | Value      |
|----------------------------|---------|------------|
| Formaldehyde (CAS 50-00-0) | Ceiling | 0.3 ppm    |
| Thimerosal (CAS 54-64-8)   | STEL    | 0.03 mg/m3 |
|                            | TWA     | 0.01 mg/m3 |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Components                 | Type    | Value      |
|----------------------------|---------|------------|
| Formaldehyde (CAS 50-00-0) | Ceiling | 0.1 ppm    |
|                            | TWA     | 0.016 ppm  |
| Thimerosal (CAS 54-64-8)   | STEL    | 0.03 mg/m3 |
|                            | TWA     | 0.01 mg/m3 |

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure guidelines

#### US - California OELs: Skin designation

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

#### US - Tennessee OELs: Skin designation

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

#### US ACGIH Threshold Limit Values: Skin designation

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

#### US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

### Control banding approach

Polymyxin B: Zoetis OEB 2 - Sensitizer (control exposure to the range of 100ug/m3 to < 1000ug/m3, provide additional precautions to protect from skin contact)

### Appropriate engineering controls

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.

|                                       |   |
|---------------------------------------|---|
| <b>Skin protection</b>                |   |
| <b>Hand protection</b>                | Wear impervious gloves if skin contact is possible.   |
| <b>Other</b>                          | Wear suitable protective clothing. Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.   |
| <b>Respiratory protection</b>         | No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment. 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. |
| <b>Thermal hazards</b>                | Not applicable.   |
| <b>General hygiene considerations</b> | 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

|   |                 |
|---|-----------------|
| <b>Appearance</b>                                   | Suspension      |
| <b>Physical state</b>                               | Liquid.         |
| <b>Form</b>   | Liquid.         |
| <b>Color</b>  | Cloudy white    |
| <b>Odor</b>   | Not available.  |
| <b>Odor threshold</b>                               | Not available.  |
| <b>pH</b>   | 6 - 8           |
| <b>Melting point/freezing point</b>                 | Not available.  |
| <b>Initial boiling point and boiling range</b>      | Not available.  |
| <b>Flash point</b>                                  | Non-flammable   |
| <b>Evaporation rate</b>                             | Not available.  |
| <b>Flammability (solid, gas)</b>                    | Not applicable. |
| <b>Upper/lower flammability or explosive limits</b> |                 |
| <b>Flammability limit - lower (%)</b>               | Not available.  |
| <b>Flammability limit - upper (%)</b>               | Not available.  |
| <b>Explosive limit - lower (%)</b>                  | Not available.  |
| <b>Explosive limit - upper (%)</b>                  | Not available.  |
| <b>Vapor pressure</b>                               | Not available.  |
| <b>Vapor density</b>                                | Not available.  |
| <b>Relative density</b>                             | Not available.  |
| <b>Solubility(ies)</b>                              |                 |
| <b>Solubility (water)</b>                           | Soluble         |
| <b>Solubility (other)</b>                           | Methanol        |
| <b>Partition coefficient (n-octanol/water)</b>      | Not available.  |
| <b>Auto-ignition temperature</b>                    | Not available.  |
| <b>Decomposition temperature</b>                    | Not available.  |
| <b>Viscosity</b>                                    | Not available.  |
| <b>Other information</b>                            |                 |
| <b>Explosive properties</b>                         | Not explosive.  |
| <b>Oxidizing properties</b>                         | Not oxidizing.  |

## 10. Stability and reactivity

|                           |   |
|---------------------------|---|
| <b>Reactivity</b>         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>Chemical stability</b> | Material is stable under normal conditions.   |



|   |   |
|---|---|
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.   |
| <b>Conditions to avoid</b>                | Contact with incompatible materials. Sunlight. Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do not freeze. |
| <b>Incompatible materials</b>             | Strong oxidizing agents. This material can be denatured or inactivated by a variety of organic solvents, salts or heavy metals.                       |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | No adverse effects due to inhalation are expected.       |
| <b>Skin contact</b> | Prolonged skin contact may cause temporary irritation.   |
| Formaldehyde        | Species: Rabbit<br>Severity: Moderate Severe             |
| <b>Eye contact</b>  | Direct contact with eyes may cause temporary irritation. |
| Thimerosal          | Species: Rabbit<br>Severity: Mild                        |
| Formaldehyde        | Species: Rabbit<br>Severity: Severe                      |

**Ingestion** Expected to be a low ingestion hazard.

**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

| Components                         | Species | Test Results   |
|------------------------------------|---------|--|
| Formaldehyde (CAS 50-00-0)         |         |  |
| <b><u>Acute</u></b>                |         |  |
| <b>Inhalation</b>                  |         |  |
| LC50                               | Rat     | 0.48 mg/l, 4 Hours   |
| <b>Oral</b>                        |         |  |
| LD50                               | Rat     | 800 mg/kg<br>100 mg/kg                                     |
| <b><u>Chronic</u></b>              |         |  |
| <b>Inhalation</b>                  |         |  |
| LOAEL                              | Mouse   | 15 ppm, 2 years Tumors                                     |
|                                    | Rat     | 15 ppm, 9 days Respiratory system<br>6 ppm, 2 years Tumors |
| Neomycin Free Base (CAS 1404-04-2) |         |  |
| <b><u>Acute</u></b>                |         |  |
| <b>Oral</b>                        |         |  |
| LD50                               | Rat     | 2750 mg/kg   |
| Polymyxin B (CAS 1404-26-8)        |         |  |
| <b><u>Acute</u></b>                |         |  |
| <b>Oral</b>                        |         |  |
| LD50                               | Mouse   | 790 mg/kg  |
| <b>Other</b>                       |         |  |
| LD50                               | Mouse   | 3980 ug/kg   |

| Components  | Species   | Test Results |
|---|---|--------------|
| <b>Subcutaneous</b>   |   |              |
| LD50  | Rat   | 50 mg/kg     |
| Thimerosal (CAS 54-64-8)  |   |              |
| <b>Acute</b>  |   |              |
| <b>Oral</b>   |   |              |
| LD50  | Mouse   | 91 mg/kg     |
|   | Rat   | 75 mg/kg     |
| <b>Subcutaneous</b>   |   |              |
| LD50  | Rat   | 98 mg/kg     |
| <b>Skin corrosion/irritation</b>                                      | Prolonged skin contact may cause temporary irritation.  |              |
| <b>Serious eye damage/eye irritation</b>                              | Direct contact with eyes may cause temporary irritation.  |              |
| <b>Eye Contact</b>  |   |              |
| Thimerosal  | Species: Rabbit<br>Severity: Mild   |              |
| Formaldehyde  | Species: Rabbit<br>Severity: Severe   |              |
| <b>Respiratory or skin sensitization</b>                              |   |              |
| <b>ACGIH sensitization</b>  |   |              |
| FORMALDEHYDE (CAS 50-00-0)  | Dermal sensitization<br>Respiratory sensitization   |              |
| <b>Respiratory sensitization</b>                                      | Not a respiratory sensitizer.   |              |
| <b>Skin sensitization</b>   | This product contains formaldehyde and merthiolate which are considered to be skin sensitizers. This product is not expected to cause skin sensitization. |              |
| <b>Germ cell mutagenicity</b>   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.  |              |
| <b>Mutagenicity</b>   |   |              |
| Formaldehyde  | In Vitro Bacterial Mutagenicity (Ames)<br>Result: Positive<br>Species: Bacteria   |              |
|   | In Vitro Chromosome Aberration<br>Result: Positive<br>Species: Rodent   |              |
|   | In Vitro Sister Chromatid Exchange<br>Result: Positive<br>Species: Rodent   |              |
| Polymyxin B   | In Vitro<br>Result: Negative  |              |
| Formaldehyde  | In Vivo Chromosome Aberration<br>Result: Positive<br>Species: Not specified   |              |
| Polymyxin B   | In Vivo<br>Result: Negative   |              |
| <b>Carcinogenicity</b>  | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. No known carcinogens are present at greater than 0.1%.                    |              |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>         |   |              |
| Formaldehyde (CAS 50-00-0)  | 1 Carcinogenic to humans.   |              |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |   |              |
| Formaldehyde (CAS 50-00-0)  | Cancer  |              |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>    |   |              |
| Formaldehyde (CAS 50-00-0)  | Known To Be Human Carcinogen.   |              |

|   |  |
|---|--|
| <b>Reproductive toxicity</b>                              | This product is not expected to cause reproductive or developmental effects.   |
| <b>Developmental effects</b><br>Formaldehyde              | 185 mg/kg/day Embryo / Fetal Development, Not teratogenic<br>Maternal toxicity<br>Species: Mouse<br>Organ: Oral  |
|   | 40 ppm Embryo / Fetal Development, Not Teratogenic<br>Maternal Toxicity<br>Species: Rat<br>Organ: Inhalation   |
| <b>Specific target organ toxicity - single exposure</b>   | Not classified.  |
| <b>Specific target organ toxicity - repeated exposure</b> | Not classified.  |
| <b>Aspiration hazard</b>                                  | Not an aspiration hazard.  |
| <b>Chronic effects</b>                                    | Prolonged inhalation may be harmful.   |
| <b>Further information</b>                                | Allergic reactions are possible. The antigens included in this product are non-infectious. All have been prepared from killed or inactivated preparations of microorganisms. This product is an oil-adjuvanted suspension. Oil-adjuvant containing products may cause severe vasospasm following accidental injection. |

## 12. Ecological information

|                    |  |
|--------------------|--|
| <b>Ecotoxicity</b> | 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. |
|--------------------|--|

| Components                           | Species   |  | Test Results                   |
|--------------------------------------|---|--|--------------------------------|
| Formaldehyde (CAS 50-00-0)           |   |  |                                |
| <b>Aquatic</b>                       |   |  |                                |
| Crustacea                            | EC50  | Water flea ( <i>Daphnia pulex</i> )      | 4.3 - 7.8 mg/l, 48 hours       |
| Fish                                 | LC50  | Striped bass ( <i>Morone saxatilis</i> ) | 10.302 - 16.743 mg/l, 96 hours |
| <b>Persistence and degradability</b> | No data is available on the degradability of this product.  |  |                                |
| <b>Bioaccumulative potential</b>     | No data available.  |  |                                |
| <b>Mobility in soil</b>              | No data available.  |  |                                |
| <b>Other adverse effects</b>         | 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

|  |   |
|--|---|
| <b>Disposal instructions</b>                 | Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. 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). Dispose of contents/container in accordance with local/regional/national/international regulations. |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.  |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. This product contains trace quantities of mercury, releases to the environment should be avoided.  |
| <b>Waste from residues / unused products</b> | 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).  |
| <b>Contaminated packaging</b>                | 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 established.

## 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.

### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Formaldehyde (CAS 50-00-0) Listed.

### SARA 304 Emergency release notification

Formaldehyde (CAS 50-00-0) 100 LBS

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Formaldehyde (CAS 50-00-0)  
Cancer  
Skin sensitization  
Respiratory sensitization  
Eye irritation  
Skin irritation  
respiratory tract irritation  
Acute toxicity  
Flammability

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories**  
Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

### SARA 302 Extremely hazardous substance

| Chemical name | CAS number | Reportable quantity (pounds) | Threshold planning quantity (pounds) | Threshold planning quantity, lower value (pounds) | Threshold planning quantity, upper value (pounds) |
|---------------|------------|------------------------------|--------------------------------------|---|---|
|---------------|------------|------------------------------|--------------------------------------|---|---|

|              |         |     |     |  |  |
|--------------|---------|-----|-----|--|--|
| Formaldehyde | 50-00-0 | 100 | 500 |  |  |
|--------------|---------|-----|-----|--|--|

**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

Formaldehyde (CAS 50-00-0)  
Thimerosal (CAS 54-64-8)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

#### US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Thimerosal (CAS 54-64-8)

Listed: July 1, 1990

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Formaldehyde (CAS 50-00-0)

**International Inventories**

| Country(s) or region        | Inventory name   | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                     | No                     |
| Canada                      | Domestic Substances List (DSL)   | No                     |
| Canada                      | Non-Domestic Substances List (NDSL)                                    | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)             | No                     |
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | 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                     |
| 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** 04-17-2014**Revision date** 05-05-2017**Version #** 03

**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.