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

**Product Identifier** 

Material Name: FluSure®XP/RespiSure®/ER Bac Plus® (H1N2)

Trade Name: FluSure™ XP/RespiSure/ER Bac Plus®

Synonyms: Swine Influenza Vaccine, H1N1, H1N2 and H3N2, Killed Virus-Erysipelothrix Rhusiopathiae-

Mycoplasma Hyopneumoniae Bacterin

Chemical Family: Mixture

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: Veterinary vaccine pellets plus liquid vaccine

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: Not classified in accordance with international standards for workplace safety.

**Other Hazards** 

**Short Term:** May cause eye, skin and respiratory tract irritation (based on components) 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	%
Aluminum hydroxide gel	21645-51-2	244-492-7	Not Listed	Not Listed	*
Formaldehyde	50-00-0	200-001-8	T; R23/24/25 C; R34 Carc.Cat.3; R40 R43	Acute Tox. 3 (H301) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Carc. 2 (H351) Acute Tox. 3 (H331)	<0.1
Merthiolate (as mercury)	54-64-8	200-210-4	T+; R26/27/28 R33 N; R50/53	Acute Tox. 2 (H330) 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			
Amphigen base	NOT ASSIGNED	Not Listed	Not Listed	Not Listed	*
Erysipelothrix rhusiopathiae	NOT ASSIGNED	Not Listed	Not Listed	Not Listed	*
Swine Influenza Virus A, strain H1N1	NOT ASSIGNED	Not Listed	Not Listed	Not Listed	*
Swine Influenza Virus A, strain H3N2	NOT ASSIGNED	Not Listed	Not Listed	Not Listed	*
Mycoplasma Hyopneumoniae	NOT ASSIGNED	Not Listed	Not Listed	Not Listed	*
Swine Influenza Virus A, strain H1N2	Not Assigned	Not Listed	Not Listed	Not Listed	*

Additional Information: \* Proprietary ## Trace

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.

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**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.

**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 tox

**Products:** 

Formation of toxic gases is possible during heating or fire.

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. Dike and collect water used to fight fire.

## 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** 

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**

Keep away from heat, sparks, and flame. Use with adequate ventilation. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Prevent environmental releases. Use appropriate personal protective equipment. Avoid accidental injection.

#### Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Store under refrigeration in closed container.

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Storage Temperature: 2-7°C
Incompatible Materials: None known
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.

#### Aluminum hydroxide gel

**ACGIH Threshold Limit Value (TWA)**  $1 \text{ mg/m}^3$  $5 \text{ mg/m}^3$ **Austria OEL - MAKs** Germany (DFG) - MAK 4 mg/m<sup>3</sup>  $1.5 \text{ mg/m}^{3}$ Latvia OEL - TWA 6 mg/m<sup>3</sup> Lithuania OEL - TWA 6 mg/m<sup>3</sup> 2.5 mg/m<sup>3</sup> **Poland OEL - TWA** 1.2 mg/m<sup>3</sup> Slovakia OEL - TWA 1.5 mg/m<sup>3</sup> **Switzerland OEL -TWAs**  $3 \text{ mg/m}^3$ 

## Formaldehyde

ACGIH Ceiling Threshold Limit:

ACGIH - Sensitizer Designation

Australia STEL

2 ppm
2.5 mg/m³

Australia TWA

1 ppm
1.2 mg/m³

Austria OEL - MAKs

0.5 ppm
0.6 mg/m³

 Bulgaria OEL - TWA
 1.0 mg/m³

 Czech Republic OEL - TWA
 0.5 mg/m³

 Estonia OEL - TWA
 0.5 ppm

 Finland OEL - TWA
 0.3 ppm

 Finland OEL - TWA
 0.3 ppm

 0.37 mg/m³

 France OEL - TWA
 0.5 ppm

 Germany (DFG) - MAK
 0.3 ppm

0.37 mg/m³ no irritation should occur during mixed exposure

**Greece OEL - TWA** 2 ppm 2.5 mg/m<sup>3</sup>

 $\begin{array}{ccc} \text{Hungary OEL - TWA} & 0.6 \text{ mg/m}^3 \\ \text{Ireland OEL - TWAs} & 2 \text{ ppm} \\ & 2.5 \text{ mg/m}^3 \end{array}$ 

Japan - OELs - Ceilings

0.2 ppm
0.24 mg/m³

 Latvia OEL - TWA
 0.5 mg/m³

 Lithuania OEL - TWA
 0.5 ppm

 0.6 mg/m³
 0.6 mg/m³

 Netherlands OEL - TWA
 0.15 mg/m³

 Vietnam OEL - TWAs
 0.5 mg/m³

0.75 ppm

**OSHA - Final PELS - TWAs:** 

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# 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA - Specifically Regulated Chemicals 2 ppm 0.5 ppm

0.75 ppm

 Poland OEL - TWA
 0.5 mg/m³

 Romania OEL - TWA
 1 ppm

 1.20 mg/m³

 Slovakia OEL - TWA
 0.3 ppm

 0.37 mg/m³
 0.5 ppm

 Sweden OEL - TWAs
 0.62 mg/m³

 0.3 ppm
 0.3 ppm

Switzerland OEL -TWAs 0.37 mg/m³
0.37 mg/m³
0.3 ppm

0.37 mg/m<sup>3</sup>

Gentamicin

Bulgaria OEL - TWA 0.1 mg/m<sup>3</sup>

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. Exposure

monitoring may be necessary to determine requirements.

mornioning may be necessary to determine requirements.

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

**Equipment:** protective equipment (PPE).

**Hands:** Wear impervious gloves if skin contact is possible.

Eyes: Safety glasses or goggles

**Skin:** Wear protective clothing when working with large quantities. Wash hands and arms thoroughly

after handling this material.

Respiratory protection: 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:Pellets plus liquid vaccineColor:No data available.Odor:No data available.Odor Threshold:No data available.

Molecular Formula: Mixture Molecular Weight: Mixture

Solvent Solubility:
Water Solubility:
PH:
No data available
No data available
No data available.
No data available.
No data available.
No data available
No data available
No data available.

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

No data available

**Decomposition Temperature (°C):** No data available.

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Evaporation Rate (Gram/s): No data available

Vapor Pressure (kPa): Expected to be negligible

Vapor Density (g/ml):No data availableRelative Density:No data availableViscosity: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:

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: Store at 2-7°C. Prolonged exposure to higher temperatures may adversely affect potency. Do

not freeze.

Incompatible Materials: None known

Hazardous Decomposition Nor

**Products:** 

None expected under normal conditions.

# 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

**General Information:** 

Toxicological properties of the formulation have not been fully investigated. 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)

Merthiolate (as mercury)

Rat Oral LD50 75 mg/kg

Rat Subcutaneous LD50 98mg/kg

Gentamicin

Rat Oral LD50 6600 mg/kg Rat Subcutaneous LD50 710mg/kg Mouse IM LD50 167 mg/kg

Rat IM LD50 463 mg/kg

Aluminum hydroxide gel

Rat Para-periosteal LD50 150 mg/kg

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## 11. TOXICOLOGICAL INFORMATION

#### **Formaldehyde**

Rat Oral LD50 800 mg/kg

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

### Merthiolate (as mercury)

Eye Irritation Rabbit Mild

#### Gentamicin

Eye Irritation Rabbit Non-irritating

#### **Formaldehyde**

Eye Irritation Rabbit Severe

Skin Irritation Rabbit Moderate Severe

#### 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

9 Day(s) Rat Inhalation 15 ppm LOAEL Respiratory system

#### Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

## Gentamicin

Embryo / Fetal Development Rat Intramuscular 75 mg/kg/day LOAEL Developmental toxicity

## 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)

## 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: No known carcinogens are present at greater than 0.1%

D7/M200

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# 11. TOXICOLOGICAL INFORMATION

**Formaldehyde** 

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

OSHA: Listed

# 12. ECOLOGICAL INFORMATION

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

**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.

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# 15. REGULATORY INFORMATION

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

Canada - WHMIS: Classifications WHMIS hazard class:

None required

Amphigen base

**CERCLA/SARA 313 Emission reporting** Not Listed Not Listed California Proposition 65 **EU EINECS/ELINCS List** Not Listed

Erysipelothrix rhusiopathiae

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed **EU EINECS/ELINCS List** Not Listed

Swine Influenza Virus A, strain H1N1

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed **EU EINECS/ELINCS List** Not Listed

Swine Influenza Virus A, strain H3N2

**CERCLA/SARA 313 Emission reporting** Not Listed **California Proposition 65** Not Listed **EU EINECS/ELINCS List** Not Listed

Aluminum hydroxide gel

**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** 244-492-7

Formaldehyde

**CERCLA/SARA 313 Emission reporting** 0.1 % **CERCLA/SARA Hazardous Substances** 100 lb and their Reportable Quantities: 45.4 kg 500 lb **CERCLA/SARA - Section 302 Extremely Hazardous TPQs** 

**CERCLA/SARA - Section 302 Extremely Hazardous** 100 lb

**Substances EPCRA RQs** 

carcinogen initial date 1/1/88 gas **California Proposition 65** 

**OSHA - Specifically Regulated Chemicals** 2 ppm 0.5 ppm

0.75 ppm

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

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15. REGULATORY INFORMATION

Australia (AICS):PresentStandard for the Uniform SchedulingSchedule 2for Drugs and Poisons:Schedule 6EU EINECS/ELINCS List200-001-8

Merthiolate (as mercury)

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

Mycoplasma Hyopneumoniae

CERCLA/SARA 313 Emission reporting

California Proposition 65

EU EINECS/ELINCS List

Not Listed

Not Listed

Swine Influenza Virus A, strain H1N2

CERCLA/SARA 313 Emission reporting

California Proposition 65

EU EINECS/ELINCS List

Not Listed

Not Listed

Gentamicin

CERCLA/SARA 313 Emission reporting

California Proposition 65

Australia (AICS):

Standard for the Uniform Scheduling

Not Listed

Not Listed

Present

Schedule 4

for Drugs and Poisons:

EU EINECS/ELINCS List 215-765-8

# **16. OTHER INFORMATION**

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

H301 - Toxic if swallowed

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H351 - Suspected of causing cancer

H331 - Toxic if inhaled

H330 - Fatal if inhaled

H310 - Fatal in contact with skin

H300 - Fatal if swallowed

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

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C - Corrosive

T - Toxic

Carcinogenic: Category 3

T+ - Very toxic

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.

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 5 - Fire Fighting Measures. Updated Section 7 - Handling and Storage. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 15 -

Regulatory 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**