

## **SAFETY DATA SHEETS**

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

078924760

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

078385047



Factrel

# Material Safety Data Sheet

WW MSDS No. 30-4311

| Section 1. Product and Company Identification |   |
|---|---|
| <b>Manufactured/Supplied by</b>               | Fort Dodge Animal Health<br>800 5th Street NW<br>P.O. Box 518<br>Fort Dodge, IA 50501<br>Phone: 515-955-4600<br>Fax: 515-955-9149 |
| <b>Product Trade Name</b>                     | Factrel   |
| <b>Common Name</b>                            | Not applicable.   |
| <b>Synonyms</b>                               | Gonadorelin Hydrochloride   |
| <b>Chemical Formula</b>                       | Mixture.  |
| <b>Chemical Family</b>                        | Veterinary pharmaceutical.  |
| <b>Material Uses</b>                          | Pharmaceutical industry: Veterinary Pharmaceutical  |
| <b>Packaging</b>                              | Vial.   |
| <b>Formula Type</b>                           | Injectable solution.  |
| <b>Date of Preparation</b>                    | 16 January 2002   |
| <b>Product No.</b>                            | 30-4311   |
| <b>Formula No.</b>                            | Not available.  |
| <b>CAS No.</b>                                | Mixture.  |
| <b>U.N. No.</b>                               | Not applicable.   |
| <b>EINECS No.</b>                             | Not applicable.   |
| <b>In Case of Emergency</b>                   | 515-955-6033  |

| Section 2. Composition - Information on Ingredients |           |       |                 |                 |
|---|-----------|-------|-----------------|-----------------|
| Name of Ingredients                                 | CAS No.   | Conc. | EU Symbol       | R Phrase        |
| 1) Gonadorelin hydrochloride                        | 9034-40-6 | <0.1  | Not controlled. | Not controlled. |
| 2) Benzyl Alcohol                                   | 100-51-6  | 2     | Xn              | R20/22          |
| 3) Sodium Chloride                                  | 7647-14-5 | 0.6   | Not controlled. | Not controlled. |
| 4) Water For Injection.                             | 7732-18-5 | 97.4  | Not controlled. | Not controlled. |

| Section 3. Hazards Identification - Summary of Primary Effects and Critical Hazards |   |
|---|---|
| <b>Acute Health Effects</b>   | Significant adverse health effects are associated with chronic high level exposures.  |
| <b>Chronic Health Effects</b>   | <b>MUTAGENIC EFFECTS:</b> Mutagenic for mammals [ Benzyl Alcohol]. [ Benzyl Alcohol]. Mutagenic for mammals [ Sodium Chloride]. [ Sodium Chloride]. Mutagenic for mammals<br>Potential organ systems affected are: Reproductive Organs.<br>Adverse effects could include: abdominal cramps/pain |
| <b>Environmental Hazards</b>  | No known significant effects or critical hazards.   |

| Section 4. First Aid Measures - (by medical responders using "Universal Precautions") |  |
|---|--|
| <b>Eye Contact</b>  | Flush eyes with plenty of water for 15 minutes, occasionally lifting upper and lower eyelids. (Check person for contact lenses and remove if present.) If redness or irritation persists have eyes examined by doctor immediately. |
| <b>Skin Contact</b>   | Flush skin with plenty of soap and water for at least 15 minutes (remove all contaminated clothing and shoes). Get medical attention if symptoms persist.  |
| <b>Inhalation</b>   | No specific treatment, treat symptomatically. If breathing is difficult give oxygen, if respiratory arrest occurs provide artificial respiration and seek immediate medical assistance.  |
| <b>Ingestion</b>  | No specific treatment, treat symptomatically. Call medical doctor or poison control center immediately if large quantities are ingested.   |

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**Notes to Medical Doctor** Direct treatment at control of symptoms.

### Section 5. Fire-Fighting Measures

**Extinguishing Media and Instructions** Follow your company's procedures. Use an extinguishing agent suitable for the surrounding class of fire.

**Special Exposure Hazards** In certain Fire conditions, traces of other toxic gases may be emitted.

**Special Fire Fighting Protective Equipment** No special product precautions or equipment.

### Section 6. Accidental Release Measures

**Small Spill Guidelines** Follow your company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see Section 8). Use a tool to scoop up solid or absorbed material and put into appropriate labeled waste container.

**Large Spill Guidelines** Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see Section 8).

**Environmental Precautions** No special measures are typically indicated.

### Section 7. Handling and Storage

**Handling (ventilation and fire prevention)** Avoid contact with eyes, skin, and clothing. Avoid generating or breathing product aerosol. Wash after handling.

**Storage (conditions and limitations)** Store tightly closed in original container. Keep containers in a well ventilated, secure location.

### Section 8. Exposure Controls and Personal Protection - (normal and intended use)

#### Exposure Guidelines

| Component         | REG. Limit                | OSHA (PEL) | ACGIH (TLV®) | Company Guideline |
|-------------------|---------------------------|------------|--------------|-------------------|
| 1) Benzyl Alcohol | TWA: 44 mg/m <sup>3</sup> |            |              |                   |

**Engineering Design and Control Measures** General ventilation is typically sufficient to keep airborne levels below established values. Provide eye wash and quick drench shower close to work station. Clean, appropriately launder, or dispose of all potentially contaminated work clothing, foot wear, and protective equipment after use.

#### Protective Clothing

**Eyes** Safety glasses, goggles or face shield where product aerosol or splash potential exists.

**Skin** Lab coat.

**Hands** Gloves, Chemical resistant.

**Respiratory** Respirator selection must be based on anticipated exposure levels, product hazards, and the safe working limits of the selected respirator. A respirator is not needed under normal and intended conditions of product use.

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**Section 9. Physical and Chemical Properties**

|                                      |  |              |                |
|--------------------------------------|--|--------------|----------------|
| <b>Physical State and Appearance</b> | Liquid. (Liquid.)                                  | <b>Odor</b>  | Not available. |
| <b>Molecular Weight</b>              | Mixture.   | <b>Color</b> | Clear          |
| <b>Boiling Point</b>                 | 100°C (212°F)                                      | <b>pH</b>    | Not available  |
| <b>Melting/Freezing Point</b>        | 0°C (32°F)   |              |                |
| <b>Density/Bulk Density</b>          | not applicable                                     |              |                |
| <b>Vapor Pressure</b>                | 18 mm of Hg (@ 20°C)                               |              |                |
| <b>Vapor Density</b>                 | Not applicable                                     |              |                |
| <b>Viscosity</b>                     | Not available.                                     |              |                |
| <b>Partition Coefficient</b>         | Not available.                                     |              |                |
| <b>Solubility</b>                    | Factrel : Easily soluble in cold water, hot water. |              |                |
| <b>Flash Point</b>                   | Not applicable                                     |              |                |
| <b>Autoignition Point</b>            | Not applicable                                     |              |                |
| <b>Explosion Limits</b>              | Not applicable                                     |              |                |
| <b>Dust Explosivity</b>              | Not applicable.                                    |              |                |

**Section 10. Stability and Reactivity**

|  |   |
|--|---|
| <b>Conditions to Avoid and Incompatibility</b> | Reactive with acids, alkalis.<br>Slightly reactive to reactive with oxidizing agents, metals. |
| <b>Decomposition Products</b>                  | These products are carbon oxides (CO, CO <sub>2</sub> ). Some metallic oxides.                |

**Section 11. Toxicological Information****Acute Effects**

| Component                    | Test | Result                               | Route      | Species |
|------------------------------|------|--------------------------------------|------------|---------|
| 1) Gonadorelin hydrochloride | LD50 | >3000 mg/kg                          | oral       | Rat     |
|                              | LD50 | >4000 mg/kg                          | oral       | Mouse   |
| 2) Benzyl Alcohol            | LD50 | 1230 mg/kg                           | oral       | Rat     |
|                              | LD50 | 1040 mg/kg                           | oral       | Rabbit  |
|                              | LD50 | 2000 mg/kg                           | dermal     | Rabbit  |
|                              | LC50 | 1000 (8 hour(s))                     | inhalation | Rat     |
| 3) Sodium Chloride           | LD50 | 3000 mg/kg                           | oral       | Rat     |
|                              | LD50 | 4000 mg/kg                           | oral       | Mouse   |
|                              | LC50 | >42000 mg/m <sup>3</sup> (1 hour(s)) | inhalation | Rat     |

**Eye Contact** Moderately irritating (USA). Irritating (EU).

**Skin Contact** Non-irritating (EU & USA).

**Inhalation** Not available.

**Ingestion** Harmful if swallowed.

**Chronic Effects**

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|                                   |   |
|-----------------------------------|---|
| <b>Target Organs</b>              | Potential organ systems affected are: Reproductive Organs.  |
| <b>Adverse Effects Statements</b> | Adverse effects could include: abdominal cramps/pain  |
| <b>Sensitization</b>              | Not available.  |
| <b>Carcinogenic Effects</b>       | Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.  |
| <b>Mutagenic Effects</b>          | Mutagenic for mammalians [ Benzyl Alcohol]. Mutagenic for bacteria and/or yeast. [ Benzyl Alcohol]. Mutagenic for mammalians [ Sodium Chloride]. Mutagenic for bacteria and/or yeast. [ Sodium Chloride]. |
| <b>Teratogenic Effects</b>        | No known human teratogenic effect   |
| <b>Reproductive Effects</b>       | PROVEN  |
| <b>Other Effects</b>              | Not available.  |

| <b>Section 12. Ecological Information</b> |   |               |               |
|---|---|---------------|---------------|
| <b>Environmental Fate</b>                 | Not available.                                    |               |               |
| <b>Environmental Hazards</b>              | No known significant effects or critical hazards. |               |               |
| <b>Ecotoxicity</b>                        |   |               |               |
| <b>Component</b>                          | <b>Species</b>                                    | <b>Period</b> | <b>Result</b> |
| 1) Benzyl Alcohol                         | EC50 (daphnia)                                    | 48 hour(s)    | 360 mg/l      |
|   | Fish  | 96 hour(s)    | 460 mg/l      |
|   | Bluegill  | 96 hour(s)    | 10 mg/l       |
| <b>Other</b>                              | Not available.                                    |               |               |

| <b>Section 13. Disposal Considerations</b>   |  |
|--|--|
| <b>Waste Handling and Disposal</b>   | Avoid disposal, make attempts to use product completely in accordance with intended use. Incinerate unwanted products and waste materials. |
| <i>Note: The waste generator must be informed of and follow all applicable rules and regulations for the handling and disposal of waste.</i> |  |

| <b>Section 14. Transport Information</b>                                 |                                 |
|--|---------------------------------|
| <b>Proper Shipping Name, Primary Class, UNNA Number, Packaging Group</b> | Not controlled.                 |
| <b>ADR/RID Classification (Road and Rail Transport)</b>                  | Not controlled.                 |
| <b>ADNR Classification (Inland Waterways)</b>                            | Not controlled.                 |
| <b>IMO/IMDG Class (Maritime Transport)</b>                               | Not controlled.                 |
| <b>ICAO/IATA (Air Transport)</b>   | Not controlled.                 |
| <b>CEFIC Tremcard</b>  | Not available.                  |
|  | <b>HI Kemler</b> Not available. |

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|                               |                 |   |                 |
|-------------------------------|-----------------|---|-----------------|
| <b>Factrel</b>                |                 | <i>Page Number: 5 of 5</i>  |                 |
| <b>U.S.A. DOT Class</b>       | Not controlled. | <b>NFPA</b><br>Health  | Flammability    |
| <b>RQ</b>                     | Not applicable. |   | Reactivity      |
| <b>Packaging Instructions</b> | Not available.  |   | Specific hazard |

|   |                 |                 |
|---|-----------------|-----------------|
| <b>Section 15. Regulatory Information and Warning Labels</b>  |                 |                 |
| <b>(R) Risk Phrases</b>   | Not applicable. | Not applicable. |
| <b>(S) Safety Phrases</b>   | Not available   |                 |
| <i>NOTE: This product has been classified in accordance with applicable country-specific regulations.</i> |                 |                 |

|   |   |
|---|---|
| <b>Section 16. Other Key Information</b>  |   |
| <b>Other Considerations</b>   | See product label and package insert for additional information.          |
| 19 January 2002   | <b>Responsible for MSDS:</b> Global Engineering, Environmental and Safety |
| Fort Dodge Animal Health -- within American Home Products Corporation   |   |
| <b>Notice to Reader</b>   |   |
| * This symbol indicates information which has changed from the previous MSDS.   |   |
| <i>The information provided in this MSDS is based on current knowledge, however, this does not constitute a warranty by the Company for that information. The product user is responsible for the appropriate and intended handling, use, and disposal of this product in accordance with label or package precautions and this information. All materials may present unknown hazards and should be used with caution.</i> |   |
| <i>MSDSs available in multiple languages</i>  |   |

# SAFETY DATA SHEET



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

### Product Identifier

**Material Name:** Gonadorelin Hydrochloride Solution

**Trade Name:** FACTREL

**Chemical Family:** Gonadotropin-releasing hormone

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

**Intended Use:** Veterinary product used for estrus synchronization

**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 and Drug 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:** Liquid

### 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:

May cause eye irritation, May cause slight skin irritation. (based on components) 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. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted. Systemic exposure may affect reproductive hormone regulation and thus affect fertility and maintenance of pregnancy.

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**Long Term:** Repeated exposure to dust or mist may produce allergic reactions.  
**Australian Hazard Classification (NOHSC):** Non-Hazardous Substance. Non-Dangerous Goods.

**Note:** This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning 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

| Ingredient                | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification                       | %        |
|---------------------------|------------|-----------------------|-------------------|--|----------|
| Benzyl Alcohol            | 100-51-6   | 202-859-9             | Xn; R20/22        | Acute Tox.4 (H302)<br>Acute Tox.4 (H332) | 2        |
| Sodium chloride           | 7647-14-5  | 231-598-3             | Not Listed        | Not Listed                               | 0.6      |
| Gonadorelin hydrochloride | 51952-41-1 | Not Listed            | Repr.Cat.2;R60    | Repr. 1B (H360F)<br>Lact. (H362)         | 50 ug/ml |

| Ingredient          | CAS Number | EU EINECS/ELINCS List | EU Classification | GHS Classification | %    |
|---------------------|------------|-----------------------|-------------------|--------------------|------|
| Water for injection | 7732-18-5  | 231-791-2             | Not Listed        | Not Listed         | 97.4 |

**Additional Information:** 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.

**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 Aggravated by Exposure:** None known

#### Indication of the Immediate Medical Attention and Special Treatment Needed

**Notes to Physician:** None

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### 5. FIRE-FIGHTING MEASURES

**Extinguishing Media:** Extinguish fires with CO<sub>2</sub>, 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**

Prevent exposure by any route. Ensure adequate ventilation. Avoid dust and mist generation. Personnel must wear appropriate protective equipment (see Section 8).

**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. Prevent discharge to drains.

**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**

Use with adequate ventilation. Avoid accidental injection. Restrict access to work area. Avoid open handling. Minimize generating airborne mists and vapors. Use process containment, local exhaust ventilation or perform work under fume hood/fume cupboard. Avoid inhalation and contact with skin, eye, and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash hands and any exposed skin after removal of PPE. Releases to the environment should be avoided.

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

**Storage Conditions:** Protect from light. Store under refrigeration in closed container. Protect from freezing. Keep out of reach of children. Store as directed by product packaging.

**Storage Temperature:** 2-8°C (36-46°F)

**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.

**Benzyl Alcohol**

|                          |                       |
|--------------------------|-----------------------|
| Bulgaria OEL - TWA       | 5.0 mg/m <sup>3</sup> |
| Czech Republic OEL - TWA | 40 mg/m <sup>3</sup>  |
| Finland OEL - TWA        | 10 ppm                |
|                          | 45 mg/m <sup>3</sup>  |
| Latvia OEL - TWA         | 5 mg/m <sup>3</sup>   |

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

|                     |                       |
|---------------------|-----------------------|
| Lithuania OEL - TWA | 5 mg/m <sup>3</sup>   |
| Poland OEL - TWA    | 240 mg/m <sup>3</sup> |

#### Sodium chloride

|                     |                     |
|---------------------|---------------------|
| Latvia OEL - TWA    | 5 mg/m <sup>3</sup> |
| Lithuania OEL - TWA | 5 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.

#### Gonadorelin hydrochloride

Zoetis OEB OEB 5 (control exposure to <1ug/m<sup>3</sup>)

#### Exposure Controls

**Engineering Controls:** Engineering controls should be used as the primary means to control exposures. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits or 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 OEB, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEB range. Respiratory protection should be worn to supplement engineering controls when handling this compound.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                           |                    |                          |                    |
|---------------------------|--------------------|--------------------------|--------------------|
| <b>Physical State:</b>    | Liquid preparation | <b>Color:</b>            | Clear              |
| <b>Odor:</b>              | No data available. | <b>Odor Threshold:</b>   | No data available. |
| <b>Molecular Formula:</b> | Mixture            | <b>Molecular Weight:</b> | Mixture            |

|   |                    |
|---|--------------------|
| <b>Solvent Solubility:</b>                                  | No data available  |
| <b>Water Solubility:</b>                                    | No data available  |
| <b>Solubility:</b>  | Soluble: Water     |
| <b>pH:</b>  | No data available. |
| <b>Melting/Freezing Point (°C):</b>                         | No data available  |
| <b>Boiling Point (°C):</b>                                  | No data available. |
| <b>Partition Coefficient: (Method, pH, Endpoint, Value)</b> |                    |
| No data available   |                    |
| <b>Decomposition Temperature (°C):</b>                      | No data available. |
| <b>Evaporation Rate (Gram/s):</b>                           | No data available  |
| <b>Vapor Pressure (kPa):</b>                                | No data available  |
| <b>Vapor Density (g/ml):</b>                                | No data available  |
| <b>Relative Density:</b>                                    | No data available  |
| <b>Viscosity:</b>   | No data available  |

#### Flammability:

**Autoignition Temperature (Solid) (°C):** No data available

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|  |                   |
|--|-------------------|
| Flammability (Solids):                       | No data available |
| Flash Point (Liquid) (°C):                   | No data available |
| Upper Explosive Limits (Liquid) (% by Vol.): | No data available |
| Lower Explosive Limits (Liquid) (% by Vol.): | No data available |

### 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 Products:  | No data available  |

### 11. TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects

**General Information:** The information in this section describes the potential hazards of the individual ingredients and the formulation. The potential hazards have not been fully evaluated. Exposure by any route should be avoided. Routes of exposure: eye contact , skin contact

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

##### Benzyl Alcohol

|     |                 |      |            |
|-----|-----------------|------|------------|
| Rat | Oral            | LD50 | 1230 mg/kg |
| Rat | Para-periosteal | LD50 | 53mg/kg    |
| Rat | Inhalation      | LC50 | >4.178mg/L |

##### Sodium chloride

|       |      |      |            |
|-------|------|------|------------|
| Rat   | Oral | LD50 | 3000 mg/kg |
| Mouse | Oral | LD50 | 4000 mg/kg |

##### Gonadorelin hydrochloride

|       |             |      |              |
|-------|-------------|------|--------------|
| Rat   | Oral        | LD50 | > 3000 mg/kg |
| Rat   | IV          | LD50 | > 150mg/kg   |
| Mouse | Intravenous | LD50 | > 100mg/kg   |

**Acute Toxicity Comments:** A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

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

##### Benzyl Alcohol

|                 |            |          |
|-----------------|------------|----------|
| Eye Irritation  | Rabbit     | Severe   |
| Skin Irritation | Rabbit     | Minimal  |
| Skin Irritation | Guinea Pig | Moderate |

##### Sodium chloride

|                |        |          |
|----------------|--------|----------|
| Eye Irritation | Rabbit | Moderate |
|----------------|--------|----------|

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### 11. TOXICOLOGICAL INFORMATION

Skin Irritation Rabbit Mild

**Irritation / Sensitization Comments:** May cause eye irritation.  
**Skin Irritation / Sensitization** May cause mild skin irritation.

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

##### **Gonadorelin hydrochloride**

28 Day(s) Monkey Intravenous 0.5 mg/kg/day NOAEL No effects at maximum dose  
28 Day(s) Rat Intravenous 5 µg/kg/day LOAEL Male reproductive system

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

##### **Gonadorelin hydrochloride**

Embryo / Fetal Development Rat Intravenous 100 µg/kg/day NOAEL No effects at maximum dose  
Embryo / Fetal Development Mouse Intravenous 100 µg/kg/day NOAEL No effects at maximum dose

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

##### **Product Level Toxicity Data**

**Acute Toxicity Estimate (ATE),** >5000 mg/kg  
**oral**

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### 12. ECOLOGICAL INFORMATION

**Environmental Overview:** Environmental properties of the formulation have not been investigated. The following information is available for the individual ingredients. Releases to the environment should be avoided.

**Toxicity:**

**Aquatic Toxicity: (Species, Method, End Point, Duration, Result)**

**Benzyl Alcohol**

|   |      |      |          |          |
|---|------|------|----------|----------|
| <i>Pimephales promelas</i> (Fathead Minnow)         | EPA  | LC50 | 96 Hours | 460 mg/L |
| <i>Daphnia magna</i> (Water Flea)                   | OECD | EC50 | 48 Hours | 230 mg/L |
| <i>Pseudokirchneriella subcapitata</i> (Green Alga) | OECD | EC50 | 72 Hours | 500 mg/L |

**Chronic Aquatic Toxicity: (Species, Method, Duration, Endpoint, Result, Adverse Endpoint)**

**Benzyl Alcohol**

|                                   |      |           |              |              |
|-----------------------------------|------|-----------|--------------|--------------|
| <i>Daphnia magna</i> (Water Flea) | OECD | 21 Day(s) | EC50 66 mg/L | Reproduction |
|-----------------------------------|------|-----------|--------------|--------------|

**Persistence and Degradability:**

**Benzyl Alcohol**

|      |                  |       |           |           |       |
|------|------------------|-------|-----------|-----------|-------|
| OECD | Activated sludge | Ready | 92% After | 14 Day(s) | Ready |
|------|------------------|-------|-----------|-----------|-------|

**Bio-accumulative Potential:** No data available

**Mobility in Soil:** No data available

### 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods:** Should not be released into the environment. 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.

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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:**

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.

##### **Benzyl Alcohol**

|  |            |
|--|------------|
| <b>CERCLA/SARA 313 Emission reporting</b>          | Not Listed |
| <b>California Proposition 65</b>                   | Not Listed |
| <b>Inventory - United States TSCA - Sect. 8(b)</b> | Present    |
| <b>Australia (AICS):</b>                           | Present    |
| <b>EU EINECS/ELINCS List</b>                       | 202-859-9  |

##### **Sodium chloride**

|  |            |
|--|------------|
| <b>CERCLA/SARA 313 Emission reporting</b>          | Not Listed |
| <b>California Proposition 65</b>                   | Not Listed |
| <b>Inventory - United States TSCA - Sect. 8(b)</b> | Present    |
| <b>Australia (AICS):</b>                           | Present    |
| <b>EU EINECS/ELINCS List</b>                       | 231-598-3  |

##### **Gonadorelin hydrochloride**

|   |            |
|---|------------|
| <b>CERCLA/SARA 313 Emission reporting</b> | Not Listed |
| <b>California Proposition 65</b>          | Not Listed |
| <b>EU EINECS/ELINCS List</b>              | Not Listed |

##### **Water for injection**

|  |            |
|--|------------|
| <b>CERCLA/SARA 313 Emission reporting</b>                              | Not Listed |
| <b>California Proposition 65</b>                                       | Not Listed |
| <b>Inventory - United States TSCA - Sect. 8(b)</b>                     | Present    |
| <b>Australia (AICS):</b>   | Present    |
| <b>REACH - Annex IV - Exemptions from the obligations of Register:</b> | Present    |
| <b>EU EINECS/ELINCS List</b>   | 231-791-2  |

### 16. OTHER INFORMATION

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

Reproductive toxicity-Cat.1B; H360F - May damage fertility

Reproductive toxicity, effects on or via lactation; H362 - May cause harm to breast-fed children

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

Acute toxicity, inhalation-Cat.4; H332 - Harmful if inhaled

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Toxic to Reproduction: Category 2  
Xn - Harmful

R60 - May impair fertility.  
R20/22 - Harmful by inhalation and 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.

**Reasons for Revision:** Updated Section 2 - Hazard Identification. Updated Section 7 - Handling and Storage. Updated Section 9 - Physical and Chemical Properties. Updated Section 11 - Toxicology Information.

**Prepared by:** Toxicology and Hazard Communication  
Zoetis Global Risk Management

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**End of Safety Data Sheet**