ULTIVA® (REMIFENTANIL HYDROCHLORIDE) FOR INJECTION
SAFETY DATA SHEET
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

Product Identifier
Product name: Ultiva® (remifentanil hydrochloride) for Injection

Intended Use of the Product
Pharmaceutical. Opioid. Use only as directed. Refer to product insert for usage instructions and product information.

Name, Address, and Telephone of the Responsible Party
Supplier: Mylan Institutional LLC
1718 Northrock Court
Rockford, IL 61103 USA
1-888-258-4199
www.mylan.com

Emergency Telephone Number
Emergency number : +1 877-446-3679

2. HAZARDS IDENTIFICATION

Patients/Consumers: Please refer to the product information insert or product label for appropriate consumer-specific information about this product when used according to the physician’s directions. Pharmaceutical Agent – Handling of this product in its final form presents minimal occupational exposure risk.

Classification of the Substance or Mixture
Classification (GHS-US)
Not classified

Label Elements
GHS-US labeling No labeling applicable

Other Hazards
Other hazards not contributing to the classification: Potent pharmaceutical agent- exposure may cause central nervous system effects (nausea, dizziness, drowsiness, loss of coordination, respiratory depression).

Unknown acute toxicity (GHS-US) Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
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</thead>
<tbody>
<tr>
<td>Remifentanil Hydrochloride</td>
<td>(CAS No) 132539-07-2</td>
<td>5 - 25</td>
<td>Not classified</td>
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</tbody>
</table>

Full text of H-phrases: see section 16

4. FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: The risk of inhalation exposure is negligible when product is in its final packaged form. If exposed and become symptomatic, move to fresh air and get medical attention if symptoms persist.

Skin Contact: Basic hygiene and appropriate precautions should prevent skin contact. If skin contact occurs, wash affected area with soap and water for at least 15 minutes. Should skin irritation, allergic reaction, or rash occur, remove contaminated clothing (if required) and seek medical advice.

Eye Contact: The risk of eye exposure is negligible when product is in its final packaged form. If eye contact occurs, flush immediately with water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Ingestion: Ingestion is not an anticipated route of exposure. If accidental ingestion occurs, flush mouth out with water and get medical attention.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Please refer to the package insert for more detailed information. Dizziness, headaches, nausea.

**Inhalation:** Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

**Skin Contact:** Absorption through the skin may occur from direct contact.

**Eye Contact:** May cause slight irritation.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. In the event of accidental injection, go immediately to the nearest emergency room.

## 5. FIREFIGHTING MEASURES

**Extinguishing Media**

**Suitable extinguishing media:** Not flammable. Use extinguishing media appropriate for surrounding fire.

**Unsuitable extinguishing media:** None known.

**Special Hazards Arising From the Substance or Mixture**

**Fire hazard:** Not flammable

**Explosion hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

**Advice for Firefighters**

**Precautionary measures fire:** Exercise caution when fighting any chemical fire.

**Firefighting instructions:** Use water spray or fog for cooling exposed containers.

**Protection during firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO₂).

**Other information:** Refer to Section 9 for flammability properties.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General measures:** Avoid all eye and skin contact and do not breathe vapor and mist.

**For Non-Emergency Personnel**

**Protective equipment:** Use appropriate personal protection equipment (PPE).

**Emergency procedures:** Evacuate unnecessary personnel.

**For Emergency Personnel**

**Protective equipment:** Equip cleanup crew with proper protection.

**Environmental Precautions**

Prevent entry to sewers and public waters.

**Methods and Material for Containment and Cleaning Up**

**Methods for cleaning up:** For small quantities associated with normal therapeutic use, collect spillage and transfer to a closed waste container for disposal. For large or bulk quantities, after absorption with inert material, collect spillage by sweeping up spilled material and place in a labeled, sealed container for proper disposal.

**Reference to Other Sections**

See heading 8, Exposure Controls and Personal Protection.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

**Patients/Consumers:** Patients should adhere to the instructions provided within the product information insert or product label for appropriate consumer-specific information about this product when used according to the physician’s directions.

**Hygiene measures:** This SDS is for a pharmaceutical agent - Handling of this product in its final form presents minimal occupational exposure risk. In an occupational setting, handle in accordance with good industrial hygiene and safety procedures. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use appropriate personal protective equipment when handling and observe good personal hygiene measures after handling.

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

**Storage conditions:** Store in a dry, cool and well-ventilated place. Protect from heat and direct sunlight.

**Storage temperature:** 2-25 °C (36-77°F)

**Specific End Use(s)**

Pharmaceutical. Refer to product insert for usage instructions and product information.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.
**Exposure Controls**

Appropriate engineering controls: Not generally required. Site-specific risk assessments should be conducted to determine the appropriate exposure control measures. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

**Personal protective equipment:** Gloves. Safety glasses. Protective clothing.

**Hand protection:** Wear protective gloves made from PVC, neoprene, nitrile, vinyl, or PVC/NBR.

**Eye protection:** In laboratory, medical or industrial settings, or operations in which airborne particulates will be generated, safety glasses with side shields are recommended.

**Skin and body protection:** In laboratory, medical or industrial settings, impervious disposable gloves and protective clothing are recommended if skin contact with drug product is possible.

**Respiratory protection:** When manufacturing or handling product in large quantities and dusts or particulates may be generated, maintain airborne concentrations below recommended limits. Workplace risk assessments should be completed before specifying and implementing respirator usage. NIOSH/MSHA approved respirators for protection should be used if respirators are found to be necessary.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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<tr>
<td>pH</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
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<tr>
<td>Melting/Freezing point</td>
</tr>
<tr>
<td>Boiling point</td>
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<tr>
<td>Flash point</td>
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<tr>
<td>Auto-ignition temperature</td>
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<td>Decomposition Temperature</td>
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<tr>
<td>Flammability (solid, gas)</td>
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<tr>
<td>Lower flammable limit</td>
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<tr>
<td>Upper flammable limit</td>
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<td>Vapor pressure</td>
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<td>Relative vapor density at 20 °C</td>
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<td>Relative density</td>
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<tr>
<td>Specific gravity</td>
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<tr>
<td>Solubility</td>
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<tr>
<td>Log Pow/Kow</td>
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<tr>
<td>Viscosity (kinematic, dynamic)</td>
</tr>
<tr>
<td>Explosion data - sensitivity to mechanical impact</td>
</tr>
<tr>
<td>Explosion data - sensitivity to static discharge</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity** Hazardous reactions will not occur under normal conditions.

**Chemical Stability** Stable under normal conditions.

**Possibility of Hazardous Reactions** Hazardous polymerization will not occur.

**Conditions to Avoid** Direct sunlight. Extremely high or low temperatures.

**Incompatible Materials** Strong oxidizers. Strong bases. Strong acids.

**Hazardous Decomposition Products** Carbon oxides (CO, CO₂).

### 11. TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects - Product**

**Acute toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Not classified (pH: 2.5 - 3.5 (after reconstitution))

**Serious Eye Damage/Irritation:** Not classified (pH: 2.5 - 3.5 (after reconstitution))

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data: Not available

12. ECOLOGICAL INFORMATION

Toxicity Not available
Persistence and Degradability Not available
Bioaccumulative Potential Not available

13. DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations. Do not dispose of waste into sewer.
Additional information: Contaminated sharps should be discarded immediately or as soon as possible in containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled. Contact your local health department for referral to a Safe Syringe Disposal Program.

14. TRANSPORT INFORMATION

In Accordance With ICAO/IATA/DOT/TDG
UN Number Not regulated for transport
UN Proper Shipping Name Not regulated for transport

15. REGULATORY INFORMATION

US Federal Regulations Not applicable
US State Regulations Not applicable
Canadian Regulations
Ultiva® (remifentanil hydrochloride) for Injection
Uncontrolled product according to WHMIS classification criteria
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by CPR.

16. OTHER INFORMATION

Revision date: 03/04/2014
Data sources: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
Other information: This document has been prepared in accordance with standards for workplace safety. The precautionary statements and warnings included might not apply in all cases. Your needs may vary depending on the potential for exposure in your workplace.

Party Responsible For The Preparation Of This Document:
Mylan Global Environmental, Health, and Safety Department
Phone Number: 304-599-2595

This MSDS has been prepared for occupational exposure and intended to address some end-user concerns; however, patients/consumers are also strongly encouraged to review the product information insert or product label for consumer-specific information about this product. Patients/Consumers: Refer to the package insert or product label for appropriate consumer-specific information about this product when used according to manufacturer's directions.
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.