# SAFETY DATA SHEET



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

**Product Identifier**

**Material Name: Bupivacaine Hydrochloride and Epinephrine Injection, USP (Hospira, Inc.)**

**Trade Name:** Bupivacaine Hydrochloride and Epinephrine Injection, USP
**Chemical Family:** Not determined

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

**Intended Use:** Pharmaceutical product used as anesthetic agent

**Details of the Supplier of the Safety Data Sheet**

**Hospira, A Pfizer Company**
**275 North Field Drive**
**Lake Forest, Illinois 60045**
**1-800-879-3477**

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

**Hospira UK Limited**
**Horizon**
**Honey Lane**
**Hurley**
**Maidenhead, SL6 6RJ**
**United Kingdom**
**Emergency telephone number:**
**International CHEMTREC (24 hours): +1-703-527-3887**

## 2. HAZARDS IDENTIFICATION

**Classification of the Substance or Mixture**

**GHS - Classification** Not classified as hazardous

**Label Elements**

**Signal Word:** Not Classified
**Hazard Statements:** Not classified in accordance with international standards for workplace safety.

**Other Hazards** An Occupational Exposure Value has been established for one or more of the ingredients (see Section 8).

**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**

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | CAS Number | EU EINECS/ELINCS List | GHS Classification | % |
|---|---|---|---|---|
| Adrenaline Acid Tartrate | 51-42-3 | 200-097-1 | Not Listed | <0.1 |
| Bupivacaine Hydrochloride | 14252-80-3 | Not Listed | Acute Tox. 2,H300 | </=0.75 |
| HYDROCHLORIC ACID | 7647-01-0 | 231-595-7 | Skin Corr.1B (H314)<br>STOT SE 3 (H335) | ** |
| Sodium chloride | 7647-14-5 | 231-598-3 | Not Listed | * |
| SODIUM HYDROXIDE | 1310-73-2 | 215-185-5 | Skin Corr. 1A (H314) | ** |
| Sodium metabisulfite USP | 7681-57-4 | 231-673-0 | Acute Tox. 4 (H302)<br>Eye Dam. 1 (H318) | <0.1 |

| Ingredient | CAS Number | EU EINECS/ELINCS List | GHS Classification | % |
|---|---|---|---|---|
| Edetate calcium disodium | 62-33-9 | 200-529-9 | Not Listed | * |
| Methylparaben | 99-76-3 | 202-785-7 | Not Listed | * |
| Water for injection | 7732-18-5 | 231-791-2 | Not Listed | * |

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

**For the full text of the 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

## 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:** Not flammable.

**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:** Contain the source of the spill or leak if it is safe to do so. Collect spill with a non-combustible absorbent material and transfer to labeled container for disposal.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

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.

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

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

**Specific end use(s):** Pharmaceutical drug product

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control Parameters**

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

**HYDROCHLORIC ACID**

| | |
|---|---|
| **ACGIH Ceiling Threshold Limit:** | 2 ppm |
| **Australia PEAK** | 5 ppm<br>7.5 mg/m$^3$ |
| **Austria OEL - MAKs** | 5 ppm<br>8 mg/m$^3$ |
| **Belgium OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Bulgaria OEL - TWA** | 5 ppm<br>8.0 mg/m$^3$ |
| **Cyprus OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---|---|
| **Czech Republic OEL - TWA** | 8 mg/m$^3$ |
| **Estonia OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Germany - TRGS 900 - TWAs** | 2 ppm<br>3 mg/m$^3$ |
| **Germany (DFG) - MAK** | 2 ppm<br>3.0 mg/m$^3$ |
| **Greece OEL - TWA** | 5 ppm<br>7 mg/m$^3$ |
| **Hungary OEL - TWA** | 8 mg/m$^3$ |
| **Ireland OEL - TWAs** | 5 ppm<br>8 mg/m$^3$ |
| **Italy OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Japan - OELs - Ceilings** | 2 ppm<br>3.0 mg/m$^3$ |
| **Latvia OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Lithuania OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Luxembourg OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Malta OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Netherlands OEL - TWA** | 8 mg/m$^3$ |
| **Poland OEL - TWA** | 5 mg/m$^3$ |
| **Portugal OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Romania OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Slovakia OEL - TWA** | 5 ppm<br>8.0 mg/m$^3$ |
| **Slovenia OEL - TWA** | 5 ppm<br>8 mg/m$^3$ |
| **Spain OEL - TWA** | 5 ppm<br>7.6 mg/m$^3$ |
| **Switzerland OEL -TWAs** | 2 ppm<br>3.0 mg/m$^3$ |
| **Vietnam OEL - TWAs** | 5 mg/m$^3$ |

**Sodium chloride**

| | |
|---|---|
| **Latvia OEL - TWA** | 5 mg/m$^3$ |
| **Lithuania OEL - TWA** | 5 mg/m$^3$ |

**SODIUM HYDROXIDE**

| | |
|---|---|
| **ACGIH Ceiling Threshold Limit:** | 2 mg/m$^3$ |
| **Australia PEAK** | 2 mg/m$^3$ |
| **Austria OEL - MAKs** | 2 mg/m$^3$ |
| **Bulgaria OEL - TWA** | 2.0 mg/m$^3$ |
| **Czech Republic OEL - TWA** | 1 mg/m$^3$ |
| **Estonia OEL - TWA** | 1 mg/m$^3$ |
| **France OEL - TWA** | 2 mg/m$^3$ |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|---|---|
| **Greece OEL - TWA** | 2 mg/m$^3$ |
| **Hungary OEL - TWA** | 2 mg/m$^3$ |
| **Japan - OELs - Ceilings** | 2 mg/m$^3$ |
| **Latvia OEL - TWA** | 0.5 mg/m$^3$ |
| **OSHA - Final PELS - TWAs:** | 2 mg/m$^3$ |
| **Poland OEL - TWA** | 0.5 mg/m$^3$ |
| **Slovakia OEL - TWA** | 2 mg/m$^3$ |
| **Slovenia OEL - TWA** | 2 mg/m$^3$ |
| **Sweden OEL - TWAs** | 1 mg/m$^3$ |
| **Switzerland OEL -TWAs** | 2 mg/m$^3$ |

**Sodium metabisulfite USP**

| | |
|---|---|
| **ACGIH Threshold Limit Value (TWA)** | 5 mg/m$^3$ |
| **Australia TWA** | 5 mg/m$^3$ |
| **Belgium OEL - TWA** | 5 mg/m$^3$ |
| **Denmark OEL - TWA** | 5 mg/m$^3$ |
| **France OEL - TWA** | 5 mg/m$^3$ |
| **Greece OEL - TWA** | 5 mg/m$^3$ |
| **Ireland OEL - TWAs** | 5 mg/m$^3$ |
| **Portugal OEL - TWA** | 5 mg/m$^3$ |
| **Spain OEL - TWA** | 5 mg/m$^3$ |
| **Switzerland OEL -TWAs** | 5 mg/m$^3$ |
| **Vietnam OEL - TWAs** | 5 mg/m$^3$ |

**Bupivacaine Hydrochloride**

**Pfizer Occupational Exposure Band (OEB):** OEB 3 (control exposure to the range of 10ug/m$^3$ to < 100ug/m$^3$)

**Exposure Controls**

**Engineering Controls:** Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

**Personal Protective Equipment:** Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE). Contact your safety and health professional or safety equipment supplier for assistance in selecting the correct protective clothing/equipment based on an assessment of the workplace conditions, other chemicals used or present in the workplace and specific operational processes.

**Hands:** Impervious gloves (e.g. Nitrile, etc.) are recommended if skin contact with drug product is possible and for bulk processing operations. (Protective gloves must meet the standards in accordance with EN374, ASTM F1001 or international equivalent.)

**Eyes:** Wear safety glasses or goggles if eye contact is possible. (Eye protection must meet the standards in accordance with EN166, ANSI Z87.1 or international equivalent.)

**Skin:** Impervious protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations. (Protective clothing must meet the standards in accordance with EN13982, ANSI 103 or international equivalent.)

**Respiratory protection:** Under normal conditions of use, 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 (e.g. particulate respirator with a half mask, P3 filter). (Respirators must meet the standards in accordance with EN140, EN143, ASTM F2704-10 or international equivalent.)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Physical State:** | Solution | **Color:** | Clear, colorless |
| **Odor:** | No data available. | **Odor Threshold:** | No data available. |
| **Molecular Formula:** | Mixture | **Molecular Weight:** | Mixture |

**Solvent Solubility:** No data available
**Water Solubility:** No data available
**pH:** 3.3-5.5
**Melting/Freezing Point (°C):** No data available
**Boiling Point (°C):** No data available.
**Partition Coefficient: (Method, pH, Endpoint, Value)**
**Water for injection**
No data available
**Sodium chloride**
No data available
**Adrenaline Acid Tartrate**
No data available
**Sodium metabisulfite USP**
No data available
**SODIUM HYDROXIDE**
No data available
**HYDROCHLORIC ACID**
No data available
**Methylparaben**
No data available
**Bupivacaine Hydrochloride**
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

**Flammablity:**
- **Autoignition Temperature (Solid) (°C):** No data available
- **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:** There are no data for this formulation. The information included in this section describes the potential hazards of the individual ingredients.

**Short Term:** May cause mild eye irritation. May cause slight skin irritation. (based on components) Anesthetic drug: may cause central nervous system and cardiovascular system effects

**Known Clinical Effects:** Adverse effects associated with therapeutic use include dizziness, nervousness, agitation, drowsiness, apprehension, euphoria, blurred/double vision, slurred speech, tremors, convulsions, and seizure. Respiratory depression and arrest may follow. Other, more serious effects seen with IV use of this drug, particularly when it is administered rapidly, are cardiovascular collapse, central nervous system depression, and/or hypotension.

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

**Sodium chloride**
Rat Oral LD50 3000 mg/kg
Mouse Oral LD50 4000 mg/kg

**Adrenaline Acid Tartrate**
Mouse Oral LD50 4 mg/kg

**HYDROCHLORIC ACID**
Rat Oral LD 50 238-277 mg/kg

**Bupivacaine Hydrochloride**
Rabbit Oral LD50 18 mg/kg
Rat Para-periosteal LD50 6mg/kg
Rat Subcutaneous LD50 43mg/kg
Mouse Intravenous LD50 6.1mg/kg

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

**Sodium chloride**
Eye Irritation Rabbit Moderate
Skin Irritation Rabbit Mild

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

**Bupivacaine Hydrochloride**
Prenatal & Postnatal Development Intravenous 0.6 mg/kg LOAEL Neonatal toxicity

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

**HYDROCHLORIC ACID**
Bacterial Mutagenicity (Ames) *Salmonella* Negative
*In Vivo* Micronucleus Rat Negative

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

## 11. TOXICOLOGICAL INFORMATION

**Sodium metabisulfite USP**

**IARC:** Group 3 (Not Classifiable)

**HYDROCHLORIC ACID**

**IARC:** Group 3 (Not Classifiable)

## 12. ECOLOGICAL INFORMATION

**Environmental Overview:** Environmental properties have not been thoroughly investigated. Releases to the environment should be avoided.

**Toxicity:** No data available

**Persistence and Degradability:** No data available

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

**Mobility in Soil:** No data available

## 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods:** Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater.

## 14. TRANSPORT INFORMATION

**The following refers to all modes of transportation unless specified below.**

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.

## 15. REGULATORY INFORMATION

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

## 15. REGULATORY INFORMATION

**Adrenaline Acid Tartrate**

| | |
|---|---|
| **CERCLA/SARA 313 Emission reporting** | Not Listed |
| **California Proposition 65** | Not Listed |
| **Australia (AICS):** | Present |
| **EU EINECS/ELINCS List** | 200-097-1 |

**Bupivacaine Hydrochloride**

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

**Edetate calcium disodium**

| | |
|---|---|
| **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** | 200-529-9 |

**HYDROCHLORIC ACID**

| | |
|---|---|
| **CERCLA/SARA 313 Emission reporting** | 1.0 % |
| **CERCLA/SARA Hazardous Substances and their Reportable Quantities:** | 5000 lb<br>2270 kg |
| **CERCLA/SARA - Section 302 Extremely Hazardous TPQs** | 500 lb |
| **CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs** | 5000 lb |
| **California Proposition 65** | Not Listed |
| **Inventory - United States TSCA - Sect. 8(b)** | Present |
| **Australia (AICS):** | Present |
| **Standard for the Uniform Scheduling for Drugs and Poisons:** | Schedule 5<br>Schedule 6 |
| **EU EINECS/ELINCS List** | 231-595-7 |

**Methylparaben**

| | |
|---|---|
| **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** | 202-785-7 |

**Sodium chloride**

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

**SODIUM HYDROXIDE**

| | |
|---|---|
| **CERCLA/SARA 313 Emission reporting** | Not Listed |

## 15. REGULATORY INFORMATION

| | |
|---|---|
| **CERCLA/SARA Hazardous Substances and their Reportable Quantities:** | 1000 lb<br>454 kg |
| **California Proposition 65** | Not Listed |
| **Inventory - United States TSCA - Sect. 8(b)** | Present |
| **Australia (AICS):** | Present |
| **Standard for the Uniform Scheduling for Drugs and Poisons:** | Schedule 5<br>Schedule 6 |
| **EU EINECS/ELINCS List** | 215-185-5 |

**Sodium metabisulfite USP**

| | |
|---|---|
| **CERCLA/SARA 313 Emission reporting** | Not Listed |
| **California Proposition 65** | Not Listed |
| **Inventory - United States TSCA - Sect. 8(b)** | Present |
| **Australia (AICS):** | Present |
| **Standard for the Uniform Scheduling for Drugs and Poisons:** | Schedule 5 |
| **EU EINECS/ELINCS List** | 231-673-0 |

**Water for injection**

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

## 16. OTHER INFORMATION

**Text of CLP/GHS Classification abbreviations mentioned in Section 3**

Serious eye damage/eye irritation-Cat.1; H318 - Causes serious eye damage
Acute toxicity, oral-Cat.2; H300 - Fatal if swallowed
Skin corrosion/irritation-Cat.1A; Skin corrosion/irritation-Cat.1B; H314 - Causes severe skin burns and eye damage
Specific target organ toxicity, single exposure; Respiratory tract irritation-Cat.3; H335 - May cause respiratory irritation

**Data Sources:** Publicly available toxicity information. Pfizer proprietary drug development information. Safety data sheets for individual ingredients.

**Revision date:** 14-Sep-2016
Product Stewardship Hazard Communication

**Prepared by:** Pfizer Global Environment, Health, and Safety Operations

Pfizer Inc believes that the information contained in this Material 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**