

## **SAFETY DATA SHEETS**

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

078009713

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

078008879 078008887

**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).**

078009499 078009747 078836627 078836635 078836643 078836650 078836668



## (M)SDS Overview

Use the search box at the top right of the site to search for safety data sheets (SDS). To locate the SDS for a specific product, enter part of the product name, filter the search using the check boxes, then click on the magnifying glass.

### US OSHA—HAZARD COMMUNICATION—CHANGE TO SAFETY DATA SHEETS

The Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (29CFR1910.1200) requires manufacturers to prepare Safety Data Sheets for chemical products that are considered "hazardous" according to the regulation. For a chemical or formulation to be hazardous under OSHA's Hazard Communication Standard, it must present either a physical hazard or health hazard.

On June 1, 2015 OSHA's revised Hazard Communication Standard became effective. The Hazard Communication Standard now requires chemical manufacturers, distributors, or importers to provide new Safety Data Sheets, formerly known as Material Safety Data Sheets (MSDS), in a revised uniform format that includes standardized section numbers and headings.

All Hospira products which require a Safety Data Sheet under the regulation have been revised and updated to the new SDS format. For the purposes of hazard communication, the term MSDS and SDS are used interchangeably on our product catalog during this transition period.

### PRODUCTS NOT REQUIRING SAFETY DATA SHEET

The list below identifies those Hospira products that do not meet OSHA's "hazardous" chemical classification. Safety data sheets have not been prepared for the products listed below.

4 Trace Elements Injection	Mannitol Injection
Acetic Acid Irrigation	Medical Devices
Aminosyn™ (An Amino Acid Injection)	Normosol™ Injection
Aminosyn™ in Dextrose Injection	Physiosol™ Irrigation
Ascorbic Acid Injection	Potassium Acetate Injection
Balanced Salt Solution	Potassium Chloride in Dextrose and Sodium Chloride Injection
Calcium Gluconate Injection	Potassium Chloride in Dextrose Injection
Cupric Chloride Injection	Potassium Chloride in Lactated
Dextran in Dextrose Injection	Potassium Chloride in Sodium Chloride Injection
Dextran in Sodium Chloride Injection	Potassium Chloride Injection
Dextrose and Lactated Ringer's Injection	Ringer's and Dextrose Injection
Dextrose and Ringer's Injection	Ringer's Injection
Dextrose and Sodium Chloride Injection	Ringer's Irrigation
Elliott's Solution A	Sodium Acetate Injection
Glycine Irrigation	Sodium Chloride Injection
Hetastarch in Sodium Chloride Injection	Sodium Chloride Irrigation
Hextend™ - 6% Hetastarch in Lactated Electrolyte Injection	Sodium Lactate Injection
Ionosol™ and Dextrose Injection	Sodium Phosphates Injection
Lactated Ringer's Injection	Sorbitol-Mannitol Irrigation
Lactated Ringer's Irrigation	Sterile Water for Injection
Liposyn™ (I.V. Fat Emulsion)	Sterile Water for Irrigation
LMD in Dextrose Injection	Theophylline in Dextrose Injection
LMD in Sodium Chloride Injection	Voluven 6% Hydroxyethyl Starch Solution
Manganese Chloride Injection	Zinc Chloride Injection

#### Disclaimer:

The information contained in these data sheets is based on the data available to Hospira as of the posting on this web site of this information, and is believed to be accurate based upon that data as of such time. This information is provided independently of any sale of the products, for purpose of hazard communication. It is not intended to constitute product performance information, and no express or implied warranty of any kind is made with respect to the product, underlying data or the information contained herein.

- [LEGAL NOTICE](#) [PRIVACY POLICY](#) [COMPLIANCE](#) [TERMS + CONDITIONS](#)

This website and its information is intended for use by United States residents only. Regulatory requirements, data requirements or medical practices may differ between countries. Therefore, information on this site may be inappropriate for use outside of the United States. Site contents are intended for informational purposes only and not intended to replace discussion with a healthcare provider. If you have any questions regarding this site, [contact Hospira](#).

09/15/2016



A Pfizer Company

# SAFETY DATA SHEET

Revision date: 27-Mar-2017

Version: 1.0

Page 1 of 8

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

### Product Identifier

**Material Name:** LACTATED RINGERS (Hospira, Inc.)

**Trade Name:** Not established

**Chemical Family:** Not determined

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

**Intended Use:** Pharmaceutical product

### 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

Hospira UK Limited  
Horizon  
Honey Lane  
Hurley  
Maidenhead, SL6 6RJ  
United Kingdom

### Emergency telephone number:

CHEMTREC (24 hours): 1-800-424-9300

Contact E-Mail: pfizer-MSDS@pfizer.com

### 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

PZ03373

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 2 of 8  
Version: 1.0

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Calcium chloride USP	10035-04-8	Not Listed	Eye Irrit. 2 (H319)	<0.1
Sodium chloride	7647-14-5	231-598-3	Not Listed	*

Ingredient	CAS Number	EU EINECS/ELINCS List	GHS Classification	%
Potassium Chloride	7447-90-7	Not Listed	Not Listed	*
Sodium lactate	72-17-3	200-772-0	Not Listed	*
Water for Injection	7732-18-5	231-791-2	Not Listed	*

**Additional Information:** \* Proprietary  
\*\* to adjust pH  
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:** No data available

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

#### Advice for Fire-Fighters

PZ03373

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 3 of 8  
Version: 1.0

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 the spill if it is safe to do so. Absorb spills with non-combustible absorbent material and transfer into a labeled container for disposal.

**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

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 product

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control Parameters

##### Sodium chloride

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

##### Calcium chloride USP

**Pfizer Occupational Exposure Band (OEB):** OEB 2 - Severe Eye Irritant (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)

##### Sodium chloride

**Pfizer Occupational Exposure Band (OEB):** OEB 1 (control exposure to the range of 1000ug/m<sup>3</sup> to 3000ug/m<sup>3</sup>)

##### Sodium lactate

**Pfizer Occupational Exposure Band (OEB):** OEB 1 (control exposure to the range of 1000ug/m<sup>3</sup> to 3000ug/m<sup>3</sup>)

#### 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.

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 4 of 8  
Version: 1.0

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Personal Protective Equipment:</b>	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.
<b>Hands:</b>	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.)
<b>Eyes:</b>	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.)
<b>Skin:</b>	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.)
<b>Respiratory protection:</b>	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

<b>Physical State:</b>	Liquid solution	<b>Color:</b>	No data available.
<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>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>			
<b>Sodium chloride</b>			
No data available			
<b>Sodium lactate</b>			
No data available			
<b>Potassium Chloride</b>			
No data available			
<b>Water for Injection</b>			
No data available			
<b>Calcium chloride USP</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		
<b>Flammability:</b>			
<b>Autoignition Temperature (Solid) (°C):</b>		No data available	
<b>Flammability (Solids):</b>		No data available	
<b>Flash Point (Liquid) (°C):</b>		No data available	
<b>Upper Explosive Limits (Liquid) (% by Vol.):</b>		No data available	

PZ03373

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 5 of 8  
Version: 1.0

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 included in this section describes the potential hazards of the individual ingredients.

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

##### Sodium chloride

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

##### Sodium lactate

Rat Oral LD50 > 90 mL/kg

##### Potassium Chloride

Rat Oral LD50 2600 mg/kg

##### Calcium chloride USP

Rat Oral LD50 1000 mg/kg  
Mouse Oral LD50 1940mg/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)

##### Sodium chloride

Eye Irritation Rabbit Moderate  
Skin Irritation Rabbit Mild

##### Sodium lactate

Eye Irritation Rabbit Mild

##### Potassium Chloride

Eye Irritation Rabbit Mild

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 6 of 8  
Version: 1.0

### 11. TOXICOLOGICAL INFORMATION

#### Calcium chloride USP

Eye Irritation Rabbit Moderate

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

### 12. ECOLOGICAL INFORMATION

**Environmental Overview:** Environmental properties have not been 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

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 7 of 8  
Version: 1.0

### 15. REGULATORY INFORMATION

#### Calcium chloride USP

CERCLA/SARA 313 Emission reporting	Not Listed
California Proposition 65	Not Listed
Australia (AICS):	Present
EU EINECS/ELINCS List	Not Listed

#### Potassium Chloride

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

#### 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 lactate

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	200-772-0

#### 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.2A; H319 - Causes serious eye irritation

**Data Sources:** Safety data sheets for individual ingredients. Publicly available toxicity information.

**Revision date:** 27-Mar-2017  
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**

PZ03373

## SAFETY DATA SHEET

Material Name: LACTATED RINGERS (Hospira, Inc.)  
Revision date: 27-Mar-2017

Page 8 of 8  
Version: 1.0

---