SAFETY DATA SHEETS

This SDS packet was issued with item:

078004341

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

074975272 076950877 078555236

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).

078071864

SAFETY DATA SHEET

Product Name: Dobutamine in 5% Dextrose Injection

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer Name And Address	Hospira, Inc. 275 North Field Drive Lake Forest, Illinois 60045 USA
Emergency Telephone	CHEMTREC: North America: 800-424-9300; International 1-703-527-3887; Australia - 61-290372994; UK - 44-870-8200418
Hospira, Inc., Non-Emergency	224 212-2000
Product Name	Dobutamine in 5% Dextrose Injection
Synonyms	(±)-4-[2-[[3-(ρ-hydroxyphenyl)-1-methylpropyl] amino]ethyl]-pyrocatechol hydrochloride

2. HAZARD(S) IDENTIFICATION

Emergency Overview

Dobutamine in 5% Dextrose Injection is a solution containing dobutamine hydrochloride, a synthetic catecholamine that is a cardiac stimulant. Clinically, it is used to increase cardiac output in the short-term treatment of cardiac decompensation due to heart disease or surgery. In the workplace, this material should be considered potentially irritating to the eyes and respiratory tract, and a potent drug. Based on clinical use, possible target organs include the cardiovascular system.

U.S. OSHA GHS Classification

Physical Hazards	**Hazard Class**	**Hazard Category**
	Not Classified	Not Classified
Health Hazards	**Hazard Class**	**Hazard Category**
	Not Classified	Not Classified

Label Element(s)

Pictogram	NA
Signal Word	NA
Hazard Statement(s)	NA
Precautionary Statement(s)	
Prevention	Do not breathe vapor or spray. Wash hands thoroughly after handling.
Response	Get medical attention if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active Ingredient Name Dobutamine Hydrochloride
Chemical Formula $C_{18}H_{23}NO_3 \bullet HCl$

Component	Approximate Percent by Weight	CAS Number	RTECS Number
Dobutamine Hydrochloride	≤0.4	49745-95-1	CZ9001000

Non-hazardous ingredients include Water for Injection and dextrose. Hazardous ingredients present at less than 1% include sodium metabisulfite and edetate disodium, dihydrate. Hydrochloric acid and/or sodium hydroxide are added to adjust the pH.

4. FIRST AID MEASURES

Eye Contact Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Skin Contact Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/ supportive care as necessary.

Inhalation Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

Ingestion Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

5. FIRE FIGHTING MEASURES

Flammability None anticipated for this aqueous product.

Fire & Explosion Hazard None anticipated for this aqueous product.

Extinguishing Media As with any fire, use extinguishing media appropriate for primary cause of fire such as carbon dioxide, dry chemical extinguishing powder or foam.

Special Fire Fighting Procedures No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Cleanup and Disposal Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill control procedures. Absorb the liquid with suitable material and clean affected area with soap and water. Dispose of spill materials according to the applicable federal, state, or local regulations.

7. HANDLING AND STORAGE

Handling No special handling required for hazard control under conditions of normal product use.

Storage No special storage required for hazard control. For product protection, follow storage recommendations noted on the product case label, the primary container label, or the product insert.

Special Precautions No special precautions required for hazard control.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits			
Component	**OSHA-PEL**	**ACGIH-TLV**	**AIHA WEEL**	**Hospira EEL**
Dobutamine Hydrochloride	8-hr TWA: Not Established	8-hr TWA: Not Established	8-hr TWA: Not Established	8-hr TWA: Not Established

Notes: OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit
ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.
AIHA WEEL: Workplace Environmental Exposure Level
EEL: Employee Exposure Limit.
TWA: 8-hour Time Weighted Average.

Respiratory Protection

Respiratory protection is normally not needed during intended product use. However, if the generation of aerosols is likely, and engineering controls are not considered adequate to control potential airborne exposures, the use of an approved air-purifying respirator with a HEPA cartridge (N95 or equivalent) is recommended under conditions where airborne aerosol concentrations are not expected to be excessive. For uncontrolled release events, or if exposure levels are not known, provide respirators that offer a high protection factor such as a powered air purifying respirator or supplied air. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions require respirator use. Personnel who wear respirators should be fit tested and approved for respirator use as required.

Skin Protection

If skin contact with the product formulation is likely, the use of latex or nitrile gloves is recommended.

Eye Protection

Eye protection is normally not required during intended product use. However, if eye contact is likely to occur, the use of chemical safety goggles (as a minimum) is recommended.

Engineering Controls

Engineering controls are normally not needed during the normal use of this product.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance/Physical State	A sterile, nonpyrogenic, prediluted solution of dobutamine hydrochloride
Odor	NA
Odor Threshold	NA
pH	3.0 (2.5 to 5.5)
Melting point/Freezing Point	NA
Initial Boiling Point/Boiling Point Range	NA
Flash Point	NA
Evaporation Rate	NA
Flammability (solid, gas)	NA
Upper/Lower Flammability or Explosive Limits	NA
Vapor Pressure	NA
Vapor Density (Air =1)	NA
Relative Density	NA
Solubility	NA
Partition Coefficient: n-octanol/water	NA
Auto-ignition Temperature	NA
Decomposition Temperature	NA
Viscosity	NA

10. STABILITY AND REACTIVITY

Reactivity Not determined.

Chemical Stability Stable under standard use and storage conditions. Dobutamine is oxygen sensitive.

Hazardous Reactions Not determined

Conditions to Avoid Not determined

Incompatibilities Dobutamine is incompatible with alkaline solutions such as sodium bicarbonate 5% and alkaline drugs.

Hazardous Decomposition Products Not determined. During thermal decomposition, it may be possible to generate irritating vapors and/or toxic fumes of carbon oxides (COx), nitrogen oxides (NOx), and hydrogen chloride.

Hazardous Polymerization Not anticipated to occur with this product.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity - Not determined for the product formulation. Information for the active ingredient is as follows:

Ingredient(s)	Percent	Test Type	Route of Administration	Value	Units	Species
Dobutamine Hydrochloride	100	LD50	Oral	2296 1324 >40	mg/kg mg/kg mg/kg	Rat Mouse Dog
Dobutamine Hydrochloride	100	LD50	Intravenous	59.6 34.3	mg/kg mg/kg	Rat Mouse

LD 50: Dosage that produces 50% mortality.

Occupational Exposure Potential Information on the absorption of this product via inhalation or skin contact is not available. Avoid liquid aerosol generation and skin contact.

Signs and Symptoms None anticipated from normal handling of this product. In clinical use, dobutamine hydrochloride produces a marked increase in heart rate and blood pressure in up to 10% of patients. Premature ventricular beats have occurred during infusion in 5% of patients. Precipitous decreases in blood pressure have occasionally been described in association with dobutamine therapy. The most frequently reported adverse effects include nausea, headache, anginal pain, nonspecific chest pain, palpitations, and shortness of breath. Other adverse effects include hypersensitivity (rash, fever, eosinophilia and bronchospasms), nausea, vomiting, tingling sensation, paresthesia, dyspnea, headache, mild leg cramps, and pruritus of the scalp have been reported.

Aspiration Hazard None anticipated from normal handling of this product.

Dermal Irritation/ Corrosion None anticipated from normal handling of this product. Dobutamine hydrochloride was non corrosive/non-irritating in a skin irritation study in animals.

Ocular Irritation/ Corrosion None anticipated from normal handling of this product. However, dobutamine hydrochloride was severely irritating and corrosive in an eye irritation test in animals. Inadvertent contact of this product with eyes may produce severe irritation with redness and tearing.

Dermal or Respiratory Sensitization None anticipated from normal handling of this product. This product contains sodium metabisulfite which can cause allergic-type reactions in people sensitive to sulfites.

11. TOXICOLOGICAL INFORMATION: continued

Reproductive Effects	None anticipated from normal handling of this product. Studies to evaluate the potential to affect fertility have not been conducted. Reproduction studies performed in rats at doses up to the normal human dose (10 mcg/kg/min for 24 hours, total daily dose of 14.4 mg/kg) and in rabbits at doses up to 2 times the normal human dose have revealed no evidence of harm to the fetus due to dobutamine.
Mutagenicity	Studies to evaluate the mutagenic potential of dobutamine hydrochloride have not been conducted.
Carcinogenicity	Studies to evaluate the carcinogenic potential of dobutamine hydrochloride have not been conducted.
Carcinogen Lists	**IARC:** Not listed **NTP:** Not listed **OSHA:** Not listed
Specific Target Organ Toxicity – Single Exposure	NA
Specific Target Organ Toxicity – Repeat Exposure	Based on clinical use, possible target organs include the cardiovascular system.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity	Not determined for product.
Persistence/Biodegradability	Not determined for product.
Bioaccumulation	Not determined for product.
Mobility in Soil	Not determined for product.

Notes:

13. DISPOSAL CONSIDERATIONS

Waste Disposal	All waste materials must be properly characterized. Further, disposal should be performed in accordance with the federal, state or local regulatory requirements.
Container Handling and Disposal	Dispose of container and unused contents in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

ADR/ADG/ DOT STATUS	Not regulated
Proper Shipping Name	NA
Hazard Class	NA
UN Number	NA
Packing Group	NA
Reportable Quantity	NA
ICAO/IATA STATUS	Not regulated
Proper Shipping Name	NA
Hazard Class	NA
UN Number	NA
Packing Group	NA
Reportable Quantity	NA
IMDG STATUS	Not regulated
Proper Shipping Name	NA
Hazard Class	NA
UN Number	NA
Packing Group	NA
Reportable Quantity	NA

Notes: DOT - US Department of Transportation Regulations

15. REGULATORY INFORMATION

US TSCA Status	Exempt
US CERCLA Status	Not listed
US SARA 302 Status	Not listed
US SARA 313 Status	Not listed
US RCRA Status	Not listed
US PROP 65 (Calif.)	Not listed

Notes: TSCA, Toxic Substance Control Act; CERCLA, US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act; SARA, Superfund Amendments and Reauthorization Act; RCRA, US EPA, Resource Conservation and Recovery Act; Prop 65, California Proposition 65

GHS/CLP Classification*

*In the EU, classification under GHS/CLP does not apply to certain substances and mixtures, such as medicinal products as defined in Directive 2001/83/EC, which are in the finished state, intended for the final user.

Hazard Class	Hazard Category	Pictogram	Signal Word	Hazard Statement
NA	NA	NA	NA	NA

Prevention

Do not breathe vapor or spray
Wash hands thoroughly after handling

Response

Get medical attention if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

EU Classification*

*Medicinal products are exempt from the requirements of the EU Dangerous Preparations Directive.

Classification(s)	NA
Symbol	NA
Indication of Danger	NA
Risk Phrases	NA
Safety Phrases	S23: Do not breathe vapor/spray S24: Avoid contact with the skin S25: Avoid contact with eyes S37/39 Wear suitable gloves and eye/face protection.

16. OTHER INFORMATION

Notes:

ACGIH TLV	American Conference of Governmental Industrial Hygienists – Threshold Limit Value
CAS	Chemical Abstracts Service Number
CERCLA	US EPA law, Comprehensive Environmental Response, Compensation, and Liability Act
DOT	US Department of Transportation Regulations
EEL	Employee Exposure Limit
IATA	International Air Transport Association
LD_{50}	Dosage producing 50% mortality
NA	Not applicable/Not available
NE	Not established
NIOSH	National Institute for Occupational Safety and Health
OSHA PEL	US Occupational Safety and Health Administration – Permissible Exposure Limit
Prop 65	California Proposition 65
RCRA	US EPA, Resource Conservation and Recovery Act
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
STEL	15-minute Short Term Exposure Limit
STOT - SE	Specific Target Organ Toxicity – Single Exposure
STOT - RE	Specific Target Organ Toxicity – Repeated Exposure
TSCA	Toxic Substance Control Act
TWA	8-hour Time Weighted Average

MSDS Coordinator: Hospira GEHS
Date Prepared: October 17, 2012
Date Revised: June 02, 2014

Disclaimer:
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SAFETY DATA SHEET

Conforms with OSHA Hazard Communication Standard (29 CFR 1910.1200) HazCom 2012

Product: EZ-Zyme® Enzymatic Cleaner (REF 3-750, 3-755) **Revision Date: 03/23/2015**

SECTION 1 - IDENTIFICATION

Product Identifier

Product Name: EZ-Zyme® Enzymatic Cleaner

Product Code: **3-750, 3-755**

Recommended Use of the Chemical and Restrictions on Use

Recommended Use: A phosphate-free, multiple enzymes formula used for ultrasonic cleaning and soaking of surgical and dental instruments.

Restrictions on Use: Product is not a sterilizing agent. All instruments must be autoclaved after cleaning.

Details of the Supplier

Manufacturered for: Integra York PA, Inc.
589 Davies Dr.
York, PA 17402 USA
1-866-854-8300

Emergency Phone Number

24-Hour Number: 1-800-535-5053
International: 1-352-323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Classification

Eye irritation, **Category 2B**; H320 - Causes eye irritation

Label Elements

Hazard Symbols(s): None

Signal Word(s): Warning

Hazard Statement(s): Causes eye irritation.

Precautionary Statements: P305 + P351 + P338: **IF IN EYES**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other Hazards

Not known.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Common Name	CAS Number	Concentration, %
Proprietary Enzyme Formula	***	100%

The specific chemical identity and exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SECTION 4 – FIRST AID MEASURES

Emergency and First Aid Procedures

Skin Exposure:
May cause skin irritation. In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Eye contact:
Causes eye irritation. Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention as needed.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Medical conditions possibly aggravated by exposure:
None.

Notes to physician:
Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE-FIGHTING MEASURES

Fire Hazard Data

Flash Point:
>140° F, Nonflammable.

Method Used:
Closed cup

Flammability Limits (vol/vol %):
Lower: No Data
Upper: No Data

Extinguishing Media:
None.

Special Fire Fighting Procedures:
Nonflammable.

Unusual Fire and Explosion Hazards:
None.

Hazardous Decomposition Materials (Under Fire Conditions):
None.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:
None.

Containment of Spill:
Follow procedure described below under "Cleanup and Disposal of Spill" below.

Cleanup and Disposal of Spill:
Mop up any spilled product and discharge in accordance with local/regional/national/international environmental disposal regulations.

Environmental and Regulatory Reporting:
None.

SECTION 7 – HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Store between 40° F and 120° F. Keep container closed when not in use.

Handling:
Avoid direct or prolonged contact with skin and eyes. If freezing occurs, thaw and remix before using. Frozen material may be thawed in a warm room. Avoid localized overheating. Vent drums while heating. Mix thoroughly to assure homogeneity.

Storage:
Store at room temperature. Store in tightly closed containers. Store in an area that is dry, well-ventilated; away from incompatible materials (see Section 10 ● Stability and Reactivity).

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

Introductory Remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13 ● Disposal Considerations. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:
No exposure limits were found for this product or any of its ingredients.

Engineering Controls:
Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: General area dilution/exhaust ventilation.

Respiratory Protection:
Not required for properly ventilated area.

Eye/Face Protection:
Recommended, but not required.

Skin Protection:
None required.

Work Practice Controls:
None required.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance:
Dark amber brown clear liquid

Odor:
Characteristic scent

Odor Threshold:
Not determined

pH:
4.20 to 5.20

Melting Point / Freezing Point Range:
Not Available

Initial Boiling Point and Boiling Range:
100° C (212 F) at 760 mmHg

Flash Point:
>140° F. Closed cup

Evaporation Rate:
As water

Flammability (solid, gas):
Nonflammable

Upper/Lower Flammability or Explosive Limits:
Not Available

Vapor Pressure:
As water

Vapor Density:
1 (Air=1)

Specific Gravity:
1.03 to 1.10 at 20° C

Water Solubility:
Completely soluble

Partition Coefficient (n-octanol/water):
No data available.

Auto-ignition temperature:
No data available.

Decomposition temperature:
No data available.

Percent Volatiles by Volume:
Nonvolatile

Viscosity:
Not available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:
No data available.
Chemical stability:
This material is stable under normal handling and storage conditions described in Section 7.
Possibility of hazardous reactions:
Hazardous polymerization will not occur**.**
Conditions to avoid:
None
Incompatible Materials:
None
Hazardous decomposition products:
None

SECTION 11 – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION (ANIMAL TOXICITY DATA)

Acute Eye Irritation:
Toxicological Information and Interpretation:
Eye - Mild eye irritation.
Acute Skin Irritation:
No test data found for product.
Acute Dermal Toxicity:
No test data found for product.
Acute Respiratory Irritation:
No test data found for product.
Acute Inhalation Toxicity:
No test data found for product.
Acute Oral Toxicity:
No test data found for product.
Chronic Toxicity:
This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens. No additional test data found for product.

11.1.11 Aspiration hazard No data

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicological Information:
No data found for product.
Chemical Fate Information:

No data found for product.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with applicable municipal, provincial, state or national regulations. Not classified as dangerous according to transport regulations.

SECTION 14 – TRANSPORT INFORMATION

Not classified as dangerous according to transport regulations.

SECTION 15 – REGULATORY INFORMATION

Inventory Status

UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.
E = All ingredients are on the inventory or exempt from listing.
P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

Chemical Safety Assessment

No additional information available.

SECTION 16 – OTHER INFORMATION

Issue Date: 03/16/2015

Revision Date: 03/16/2015

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