#### NOREPINEPHRINE BITARTRATE- norepinephrine bitartrate injection, solution Baxter Healthcare Corporation

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| HIGHLIGHTS OF PRESCRIBING INFORMATION<br>These highlights do not include all the information needed to use NOREPINEPHRINE<br>BITARTRATE IN DEXTROSE injection safely and effectively. See full prescribing information<br>for NOREPINEPHRINE BITARTRATE IN DEXTROSE injection.<br>NOREPINEPHRINE BITARTRATE IN DEXTROSE injection, for intravenous use<br>Initial U.S. Approval: 1950<br>INDICATIONS AND USAGE   |
|--|
| Norepinephrine Bitartrate in Dextrose Injection is a catecholamine indicated for restoration of blood pressure in adult patients with acute hypotensive states. (1)  |
| DOSAGE AND ADMINISTRATION  |
| <ul> <li>No further dilution prior to infusion is required. (2.1)</li> <li>Initiate at 8 to 12 mcg/min, and adjust the rate to maintain blood pressure sufficient to maintain the circulation of vital organs. (2.2)</li> <li>The average maintenance dose ranges from 2 to 4 mcg/min. (2.2)</li> </ul>  |
|  |
| <ul> <li>4 mg equivalent of norepinephrine (16 mcg/mL) in 5% dextrose.</li> <li>8 mg equivalent of norepinephrine (32 mcg/mL) in 5% dextrose.</li> <li>16 mg equivalent of norepinephrine (64 mcg/mL) in 5% dextrose.</li> </ul>   |
| CONTRAINDICATIONS  |
| • None. (4)  |
|  |
| <ul> <li><u>Tissue Ischemia</u>: Infuse Norepinephrine Bitartrate in Dextrose Injection into a large vein. To prevent sloughing and necrosis in areas in with extravasation, infiltrate the area with an adrenergic blocking agent in saline. (5.1)</li> <li><u>Hypotension After Abrupt Discontinuation</u>: Gradually taper a norepinephrine infusion to prevent hypotension. (5.2)</li> <li><u>Cardiac Arrhythmias</u>: Norepinephrine Bitartrate in Dextrose Injection may cause arrhythmias. Monitor cardiac function in patients with underlying heart disease. (5.3)</li> </ul> |
| ADVERSE REACTIONS  |
| Serious adverse reactions are described in greater detail in other sections [see Warnings and Precautions (5.1, 5.2, & 5.3)].<br>Most common adverse reactions are hypertension, bradycardia, ischemic injury, anxiety, headache, respiratory difficulty, pulmonary edema, and extravasation necrosis at injection site. (6)<br><b>To report SUSPECTED ADVERSE REACTIONS, contact Baxter Healthcare at 1-866-888-2472 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.</b>  |
| DRUG INTERACTIONS  |
| <ul> <li>Monoamine oxidase inhibitors (MAOI) or tricyclic antidepressants of the triptyline or imipramine types may result in hypertension. (7.1, 7.2)</li> <li>Antidiabetics: Norepinephrine can decrease insulin sensitivity and raise blood glucose (7.3)</li> <li>Cyclopropane and halothane anesthetics increase cardiac autonomic irritability. (7.4)</li> </ul>   |
|  |

• Elderly patients may be at greater risk of developing adverse reactions (8.5)

#### See 17 for PATIENT COUNSELING INFORMATION.

#### **FULL PRESCRIBING INFORMATION: CONTENTS\***

#### **1 INDICATIONS AND USAGE**

### **2 DOSAGE AND ADMINISTRATION**

2.1 Important Dosage and Administration Instructions

- 2.2 Dosage
- 2.3 Drug Incompatibilities

#### **3 DOSAGE FORMS AND STRENGTHS**

**4 CONTRAINDICATIONS** 

### **5 WARNINGS AND PRECAUTIONS**

- 5.1 Tissue Ischemia
- 5.2 Hypotension after Abrupt Discontinuation
- 5.3 Cardiac Arrhythmias

### **6 ADVERSE REACTIONS**

### **7 DRUG INTERACTIONS**

- 7.1 MAO-Inhibiting Drugs
- 7.2 Tricyclic Antidepressants
- 7.3 Antidiabetics
- 7.4 Halogenated Anesthetics

## **8 USE IN SPECIFIC POPULATIONS**

- 8.1 Pregnancy
- 8.2 Lactation
- 8.4 Pediatric Use
- 8.5 Geriatric Use

### **10 OVERDOSAGE**

### **11 DESCRIPTION**

### **12 CLINICAL PHARMACOLOGY**

- 12.1 Mechanism of Action
- 12.2 Pharmacodynamics
- 12.3 Pharmacokinetics

## **13 NONCLINICAL TOXICOLOGY**

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

## **16 HOW SUPPLIED/STORAGE AND HANDLING**

### **17 PATIENT COUNSELING INFORMATION**

\* Sections or subsections omitted from the full prescribing information are not listed.

## FULL PRESCRIBING INFORMATION

## **1 INDICATIONS AND USAGE**

Norepinephrine Bitartrate in Dextrose Injection is indicated to raise blood pressure in adult patients with severe, acute hypotension.

## **2 DOSAGE AND ADMINISTRATION**

#### 2.1 Important Dosage and Administration Instructions

#### Correct Hypovolemia

Address hypovolemia before initiation of Norepinephrine Bitartrate in Dextrose Injection therapy. If the patient does not respond to therapy, suspect occult hypovolemia [see Warnings and Precautions (5.1)].

#### <u>Administration</u>

Norepinephrine Bitartrate in Dextrose Injection is a ready to administer product that requires no further dilution prior to infusion. Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. Do not use the solution if its color is pinkish or darker than slightly yellow or if it contains a precipitate.

Infuse Norepinephrine Bitartrate in Dextrose Injection into a large vein. Avoid infusions into the veins of the leg in the elderly or in patients with occlusive vascular disease of the legs [see Warnings and Precautions (5.1)]. Avoid using a catheter-tie-in technique.

The choice of appropriate concentration of Norepinephrine Bitartrate in Dextrose Injection depends on clinical fluid volume requirements. Use higher concentration solutions in patients requiring fluid restriction.

#### **Discontinuation**

When discontinuing the infusion, reduce the flow rate gradually. Avoid abrupt withdrawal.

#### 2.2 Dosage

After an initial dosage of 8 to 12 mcg per minute via intravenous infusion, assess patient response and adjust dosage to maintain desired hemodynamic effect. Monitor blood pressure every two minutes until the desired hemodynamic effect is achieved, and then monitor blood pressure every five minutes for the duration of the infusion.

Typical maintenance intravenous dosage is 2 to 4 mcg per minute.

### 2.3 Drug Incompatibilities

Avoid contact with iron salts, alkalis, or oxidizing agents.

Whole blood or plasma, if indicated to increase blood volume, should be administered separately.

## **3 DOSAGE FORMS AND STRENGTHS**

Injection: Norepinephrine bitartrate in 5% dextrose is a colorless to slightly yellow solution for intravenous infusion, supplied in 250-mL single dose containers as:

- 4 mg equivalent of norepinephrine (16 mcg/mL).
- 8 mg equivalent of norepinephrine (32 mcg/mL).

• 16 mg equivalent of norepinephrine (64 mcg/mL).

## **4 CONTRAINDICATIONS**

None.

## **5 WARNINGS AND PRECAUTIONS**

### 5.1 Tissue Ischemia

Administration of Norepinephrine Bitartrate in Dextrose Injection to patients who are hypotensive from hypovolemia can result in severe peripheral and visceral vasoconstriction, decreased renal perfusion and reduced urine output, tissue hypoxia, lactic acidosis, and reduced systemic blood flow despite "normal" blood pressure. Address hypovolemia prior to initiating Norepinephrine Bitartrate in Dextrose Injection *[see Dosage and Administration (2.1)].* Avoid Norepinephrine Bitartrate in Dextrose Injection in patients with mesenteric or peripheral vascular thrombosis, as this may increase ischemia and extend the area of infarction.

Gangrene of the extremities has occurred in patients with occlusive or thrombotic vascular disease or who received prolonged or high dose infusions. Monitor for changes to the skin of the extremities in susceptible patients.

Extravasation of Norepinephrine Bitartrate in Dextrose Injection may cause necrosis and sloughing of surrounding tissue. To reduce the risk of extravasation, infuse into a large vein, check the infusion site frequently for free flow, and monitor for signs of extravasation [see Dosage and Administration (2.1)].

#### **Emergency Treatment of Extravasation**

To prevent sloughing and necrosis in areas in which extravasation has occurred, infiltrate the ischemic area as soon as possible, using a syringe with a fine hypodermic needle with 5 to 10 mg of phentolamine mesylate in 10 to 15 mL of 0.9% Sodium Chloride Injection in adults.

Sympathetic blockade with phentolamine causes immediate and conspicuous local hyperemic changes if the area is infiltrated within 12 hours.

## 5.2 Hypotension after Abrupt Discontinuation

Sudden cessation of the infusion rate may result in marked hypotension. When discontinuing the infusion, gradually reduce the Norepinephrine Bitartrate in Dextrose Injection infusion rate while expanding blood volume with intravenous fluids.

## 5.3 Cardiac Arrhythmias

Norepinephrine Bitartrate in Dextrose Injection elevates intracellular calcium concentrations and may cause arrhythmias, particularly in the setting of hypoxia or hypercarbia. Perform continuous cardiac monitoring of patients with arrhythmias.

## **6 ADVERSE REACTIONS**

The following serious adverse reactions are described in greater detail in other sections:

- Tissue Ischemia [see Warnings and Precautions (5.1)]
- Hypotension [see Warnings and Precautions (5.2)]
- Cardiac Arrhythmias [see Warnings and Precautions (5.3)]

The most common adverse reactions are hypertension and bradycardia.

The following adverse reactions can occur:

Nervous system disorders: Anxiety, headache

Respiratory disorders: Respiratory difficulty, pulmonary edema

*General disorders and administration site conditions*: Extravasation, injection site necrosis [see Warnings and Precautions (5.1)].

## 7 DRUG INTERACTIONS

## 7.1 MAO-Inhibiting Drugs

Co-administration of Norepinephrine Bitartrate in Dextrose Injection with monoamine oxidase (MAO) inhibitors or other drugs with MAO-inhibiting properties (e.g., linezolid) can cause severe, prolonged hypertension.

If administration of Norepinephrine Bitartrate in Dextrose Injection cannot be avoided in patients who recently have received any of these drugs and in whom, after discontinuation, MAO activity has not yet sufficiently recovered, monitor for hypertension.

## 7.2 Tricyclic Antidepressants

Co-administration of Norepinephrine Bitartrate in Dextrose Injection with tricyclic antidepressants (including amitriptyline, nortriptyline, protriptyline, clomipramine, desipramine, imipramine) can cause severe, prolonged hypertension. If administration of Norepinephrine Bitartrate in Dextrose Injection cannot be avoided in these patients, monitor for hypertension.

## 7.3 Antidiabetics

Norepinephrine Bitartrate in Dextrose Injection can decrease insulin sensitivity and raise blood glucose. Monitor glucose and consider dosage adjustment of antidiabetic drugs.

## 7.4 Halogenated Anesthetics

Concomitant use of Norepinephrine Bitartrate in Dextrose Injection with halogenated anesthetics (e.g., cyclopropane, desflurane, enflurane, isoflurane, and sevoflurane) may lead to ventricular tachycardia or ventricular fibrillation. Monitor cardiac rhythm in patients receiving concomitant halogenated anesthetics.

## **8 USE IN SPECIFIC POPULATIONS**

### 8.1 Pregnancy

#### <u>Risk Summary</u>

Limited published data consisting of a small number of case reports and multiple small trials involving the use of norepinephrine in pregnant women at the time of delivery have not identified an increased risk of major birth defects, miscarriage or adverse maternal or fetal outcomes. There are risks to the mother and fetus from hypotension associated with septic shock, myocardial infarction and stroke which are medical emergencies in pregnancy and can be fatal if left untreated. *(see Clinical Considerations).* In animal reproduction studies, using high doses of intravenous norepinephrine resulted in lowered maternal placental blood flow. Clinical relevance to changes in the human fetus is unknown since the average maintenance dose is ten times lower *(see Data).* Increased fetal reabsorptions were observed in pregnant hamsters after receiving daily injections at approximately 2 times the maximum recommended dose on a mg/m<sup>3</sup> basis for four days during organogenesis *(see Data).* 

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

### Clinical Considerations

### Disease-associated maternal and/or embryo/fetal risk

Hypotension associated with septic shock, myocardial infarction, and stroke are medical emergencies in pregnancy which can be fatal if left untreated. Delaying treatment in pregnant women with hypotension associated with septic shock, myocardial infarction and stroke may increase the risk of maternal and fetal morbidity and mortality. Lifesustaining therapy for the pregnant woman should not be withheld due to potential concerns regarding the effects of norepinephrine on the fetus.

#### <u>Data</u>

### Animal Data

A study in pregnant sheep receiving high doses of intravenous norepinephrine (40 mcg/min, at approximately 10 times the average maintenance dose of 2-4 mcg/min in human, on a mg/kg basis) exhibited a significant decrease in maternal placental blood flow. Decreases in fetal oxygenation, urine and lung liquid flow were also observed.

Norepinephrine administration to pregnant rats on Gestation Day 16 or 17 resulted in cataract production in rat fetuses.

In hamsters, an increased number of resorptions (29.1% in study group vs. 3.4% in control group), fetal microscopic liver abnormalities and delayed skeletal ossification were observed at approximately 2 times the maximum recommended intramuscular or subcutaneous dose (on a mg/m<sup>2</sup> basis at a maternal subcutaneous dose of 0.5 mg/kg/day from Gestation Day 7-10).

## 8.2 Lactation

#### **Risk Summary**

There are no data on the presence of norepinephrine in either human or animal milk, the

effects on the breastfed infant, or the effects on milk production. Clinically relevant exposure to the infant is not expected based on the short half-life and poor oral bioavailability of norepinephrine.

## 8.4 Pediatric Use

Safety and effectiveness in pediatric patients have not been established.

## 8.5 Geriatric Use

Clinical studies of norepinephrine did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Other reported clinical experience has not identified differences in responses between the elderly and younger patients. In general, dose selection for an elderly patient should be cautious, usually starting at the low end of the dosing range, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

Avoid administration of Norepinephrine Bitartrate in Dextrose Injection into the veins in the leg in elderly patients [see Warnings and Precautions (5.1)].

## **10 OVERDOSAGE**

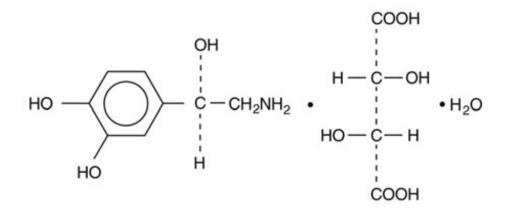
Overdosage with Norepinephrine Bitartrate in Dextrose Injection may result in headache, severe hypertension, reflex bradycardia, marked increase in peripheral resistance, and decreased cardiac output.

In case of overdosage, discontinue Norepinephrine Bitartrate in Dextrose Injection until the condition of the patient stabilizes.

# **11 DESCRIPTION**

Norepinephrine Bitartrate in Dextrose Injection contains norepinephrine, a sympathomimetic amine. Norepinephrine is sometimes referred to as l-arterenol/Levarterenol or l-norepinephrine which differs from epinephrine by the absence of a methyl group on the nitrogen atom.

Chemically, norepinephrine bitartrate monohydrate is (-)-α-(aminomethyl)-3,4dihydroxybenzyl alcohol tartrate (1:1) (salt) monohydrate and has the following structural formula:



Norepinephrine is sparingly soluble in water, very slightly soluble in alcohol and ether, and readily soluble in acids.

Norepinephrine Bitartrate in Dextrose Injection is supplied as a sterile aqueous solution administered by intravenous infusion. Each mL contains the equivalent of 16, 32, or 64 micrograms of norepinephrine base supplied as 31.90, 63.80, and 127.60 micrograms per mL of norepinephrine bitartrate monohydrate. It contains dextrose monohydrate (50 mg/mL) and may contain hydrochloric acid and/or sodium hydroxide for pH adjustment. It has a target pH of 3.7. The air in the containers has been displaced by nitrogen gas.

## **12 CLINICAL PHARMACOLOGY**

## 12.1 Mechanism of Action

Norepinephrine is a peripheral vasoconstrictor (alpha-adrenergic action) and an inotropic stimulator of the heart and dilator of coronary arteries (beta-adrenergic action).

## **12.2 Pharmacodynamics**

The primary pharmacodynamic effects of norepinephrine are cardiac stimulation and vasoconstriction. Cardiac output is generally unaffected, although it can be decreased, and total peripheral resistance is also elevated. The elevation in resistance and pressure result in reflex vagal activity, which slows the heart rate and increases stroke volume. The elevation in vascular tone or resistance reduces blood flow to the major abdominal organs as well as to skeletal muscle. Coronary blood flow is substantially increased secondary to the indirect effects of alpha stimulation. After intravenous administration, a pressor response occurs rapidly and reaches steady state within 5 minutes. The pharmacologic actions of norepinephrine are terminated primarily by uptake and metabolism in sympathetic nerve endings. The pressor action stops within 1-2 minutes after the infusion is discontinued.

### **12.3 Pharmacokinetics**

### <u>Absorption</u>

Following initiation of intravenous infusion, the steady state plasma concentration is achieved in 5 min.

### **Distribution**

Plasma protein binding of norepinephrine is approximately 25%. It is mainly bound to plasma albumin and to a smaller extent to prealbumin and alpha 1-acid glycoprotein. The volume of distribution is 8.8 L. Norepinephrine localizes mainly in sympathetic nervous tissue. It crosses the placenta but not the blood-brain barrier.

#### **Elimination**

The mean half-life of norepinephrine is approximately 2.4 min. The average metabolic clearance is 3.1 L/min.

### <u>Metabolism</u>

Norepinephrine is metabolized in the liver and other tissues by a combination of reactions involving the enzymes catechol-O-methyltransferase (COMT) and monoamine oxidase (MAO). The major metabolites are normetanephrine and 3-methoxy-4-hydroxy mandelic acid (vanillylmandelic acid, VMA), both of which are inactive. Other inactive metabolites include 3-methoxy-4-hydroxyphenylglycol, 3,4-dihydroxymandelic acid, and 3,4-dihydroxyphenylglycol.

### Excretion

Norepinephrine metabolites are excreted in urine primarily as the sulfate conjugates and, to a lesser extent, as the glucuronide conjugates. Only small quantities of norepinephrine are excreted unchanged.

## **13 NONCLINICAL TOXICOLOGY**

## 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenesis, mutagenesis, and fertility studies have not been performed.

## **16 HOW SUPPLIED/STORAGE AND HANDLING**

Norepinephrine Bitartrate in Dextrose Injection for intravenous infusion is a colorless to slightly yellow solution available in single-dose, ready-to-use containers in an amber/foil overwrap. Each 250 mL of Norepinephrine Bitartrate in Dextrose Injection, 4 mg/250 mL, 8 mg/250 mL, and 16 mg/250 mL contains the equivalent of 4 mg, 8 mg, and 16 mg of norepinephrine, respectively (provided as norepinephrine bitartrate monohydrate). Norepinephrine Bitartrate in Dextrose Injection is available in the following:

| Product Description               | NDC Number       |
|-----------------------------------|------------------|
| Twenty containers of 4 mg/250 mL  | NDC 0338-0112-20 |
| Twenty containers of 8 mg/250 mL  | NDC 0338-0108-20 |
| Twenty containers of 16 mg/250 mL | NDC 0338-0116-20 |

Store at room temperature [20°C to 25°C (68°F to 77°F)], excursions permitted to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature]. Protect from light. Once the overwrap is removed, the bag can be stored at room temperature for up to 30 days.

## **17 PATIENT COUNSELING INFORMATION**

Risk of Tissue Damage

Advise the patient, family, or caregiver to report signs of extravasation urgently [see Warnings and Precautions (5.1)].

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CB-30-02-920

## PACKAGE/LABEL PRINCIPAL DISPLAY PANEL



For Intravenous Infusion Only

Each 100 mL of sterile, nonpyrogenic solution contains: Norepinephrine Bitartrate Monohydrate USP equivalent to 1.6 mg norepinephrine and 5 g Dextrose Monohydrate in Water for Injection, USP. May contain hydrochloric acid and/or sodium hydroxide for pH adjustment.

Single Dose Only – Discard unused portion. For Intravenous Use. Recommended dosage: See prescribing information. Store at 20°C to 25°C (68°F to 77°F), excursions permitted to 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature]. Protect from light. Keep in overwrap until ready to use. Once removed from overwrap, bag can be stored at room temperature and should be used within 30 days.

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Baxter Healthcare Corporation Deerfield, IL 60015 USA Made in Ireland Viaflo container

Do not use this port



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**Container Label** 

-35-05-133

#### EZPE7748 NDC 0338-0112-20

#### 250 mL

Norepinephrine Bitartrate in 5% Dextrose Injection

#### 4 mg / 250 mL (16 mg / mL)

For Intravenous Infusion Only

Each 100mL of sterile, nonpyrogenic solution contains: Norepinephrine Bitartrate Monohydrate USP equivalent to 1.6 mg norepinephrine and 5 g Dextrose Monohydrate in Water for Injection, USP. May contain hydrochloric acid and/or sodium hydroxide for pH adjustment.

Single Dose Only – Discard unused portion. For Intravenous Use. Recommended dosage: See prescribing information.

Store at 20°C to 25°C (68°F to 77°F), excursions permitted to 15° C to 30°C (59°F to 86° F) [see USP Controlled Room Temperature.] Protect from light. Keep in overwrap until ready to use. Once removed from overwrap, bag can be stored at room temperature and should be used within 30 days.

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VIAFLO container

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Barcode (01)00303380112203

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NDC 0338-0108-20 EZPE7788 250 mL Norepinephrine Bitartrate in 5% Dextrose Injection

# 8 mg / 250 mL (32 mcg / mL)

For Intravenous Infusion Only

Each 100 mL of sterile, nonpyrogenic solution contains: Norepinephrine Bitartrate Monohydrate USP equivalent to 3.2 mg norepinephrine and 5 g Dextrose Monohydrate in Water for Injection, USP. May contain hydrochloric acid and/or sodium hydroxide for pH adjustment.

Single Dose Only - Discard unused portion. For Intravenous Use. Recommended dosage: See prescribing information. Store at 20°C to 25°C (68°F to 77°F), excursions permitted to 15°C to

30°C (59°F to 86°F) [see USP Controlled Room Temperature]. Protect from light. Keep in overwrap until ready to use. Once removed from overwrap, bag can be stored at room temperature and should be used within 30 days.

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EXP

#### **Container Label**

#### **EZPE7788** NDC 0338-0108-20 250 mL

## Norepinephrine

Bitartrate in 5% Dextrose Injection

#### 8 mg / 250 mL (32 mcg / mL) For Intravenous Infusion Only

Each 100 mL of sterile, nonpyrogenic solution contains: Norepinephrine Bitartrate Monohydrate USP equivalent to 3.2 mg norepinephrine and 5 g Dextrose Monohydrate in Water for Injection, USP. May contain hydrochloric acid and/or sodium hydroxide for pH adjustment.

Single Dose Only – Discard unused portion. For Intravenous Use. Recommended dosage: See prescribing information. Store at 20°C to 25°C (68°F to 77°F), excursions permitted to 15°C to 30°C (59°F to 86°F). [See USP Controlled Room Temperature.] Protect from light. Keep in overwrap until ready to use. Once removed from overwrap, bag can be stored at room temperature and should be used within 30 days.

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VIAFLO container

Symbol Do not use this port

## Symbol

**07** 0 CB-35-05-134 Symbol 1

## Barcode

(01)00303380108206

## LOT

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| EZPE7758  | NDC 0338-0116-  | 20 25  | 0 mL         |
|---|---|--|--------------|
|   | epine   |  | 9            |
|   | <b>16 mg / 25</b><br>(64 mcg / n  |  | _            |
|   | For Intravenous Infu  |  |              |
| Bitartrate Monohyo<br>5 g Dextrose Mono   | erile, nonpyrogenic solut<br>drate USP equivalent to 6<br>shydrate in Water for Inje<br>and/or sodium hydroxide   | 5.4 mg norepinephrine a<br>ction, USP. May contain                                       | nd           |
| Recommended dos<br>Store at 20°C to 25<br>30°C (59°F to 86°F<br>from light. Keep in | Discard unused portion.<br>sage: See prescribing inf<br>5°C (68°F to 77°F), excur<br>7) [see USP Controlled Ro<br>overwrap until ready to<br>be stored at room temp | ormation.<br>sions permitted to 15°C<br>om Temperature]. Prote<br>use. Once removed fron | ct<br>n      |
| Viaflo container is r<br>Rx Only  | not made with natural rub   | ber latex, DEHP, or PVC.   | 5144         |
| Baxter<br>Baxter Healthcare Co<br>Deerfield, IL 60015 US<br>Made in Ireland         |   |  | CB-35-05-144 |
| Viaflo container<br>Do not use<br>this port   | æ 🛄   | 0030338011620  | 1            |
| LOT   |   |  | EXP          |
|   |   | Cont   | ainer Label  |
| EZPE7758<br>NDC 0338-   | 0116-20   |  |              |
| 250 mL  |   |  |              |
| <b>Norepinep</b><br>Bitartrate in   | <b>hrine</b><br>5% Dextrose l   | njection   |              |
| 16 mg / 25  | 0 mL  |  |              |

16 mg / 250 mL (64 mcg / mL) For Intravenous Infusion Only

Each 100 mL of sterile, nonpyrogenic solution contains: Norepinephrine Bitartrate Monohydrate USP equivalent to 6.4 mg norepinephrine and 5 g Dextrose Monohydrate in Water for Injection, USP. May contain hydrochloric acid and/or sodium hydroxide for pH adjustment.

Single Dose Only – Discard unused portion. For Intravenous Use. Recommended dosage: See prescribing information. Store at 20°C to 25°C (68°F to 77°F), excursions permitted to 15°C to 30°C (59°F to 86°F). [See USP Controlled Room Temperature.] Protect from light. Keep in overwrap until ready to use. Once removed from overwrap, bag can be stored at room temperature and should be used within 30 days.

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## Barcode

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### LOT

#### EXP

| NOREPINEPHRINE BITARTRATE   |                                      |  |                |                     |  |  |
|---|--------------------------------------|--|----------------|---------------------|--|--|
| norepinephrine bitartrate inje  | ction, solution                      |  |                |                     |  |  |
|   |                                      |  |                |                     |  |  |
|   |                                      |  |                |                     |  |  |
| Product Information   |                                      |  |                |                     |  |  |
| Product Type  | HUMAN PRESCRIPTION DRUG Item Code (S |  |                | NDC:0338-0112       |  |  |
| Route of Administration   | oute of Administration INTRAVENOUS   |  |                |                     |  |  |
|   |                                      |  |                |                     |  |  |
|   |                                      |  |                |                     |  |  |
| Active Ingredient/Active Moiety   |                                      |  |                |                     |  |  |
| Ingredient Name Basis of Strength Strength                                      |                                      |  |                |                     |  |  |
| NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3ZRW) (NOREPINEPHRINE - UNII:X4W3ENH1CV) |                                      |  | NOREPINEPHRINI | E 4 mg<br>in 250 mL |  |  |
|   |                                      |  |                |                     |  |  |
| Inactive Ingredients  |                                      |  |                |                     |  |  |
| Ing   | gredient Name                        |  | S              | trength             |  |  |
| DEXTROSE MONOHYDRATE (UNII  | : LX22YL083G)                        |  | 12.5 g in 2    | 50 mL               |  |  |
| SODIUM HYDROXIDE (UNII: 55X04QC32I)   |                                      |  |                |                     |  |  |

| Marketing<br>NDC:0338-<br>0112-20       Package Description       Marketing<br>Start Date       Marketing<br>En         1       NDC:0338-<br>0112-20       20 in 1 CARTON       01/15/2021       01/15/2021         1       250 mL in 1 BAG; Type 9: Other Type of Part 3 Combination<br>Product (e.g., Drug/Device/Biological Product)       01/15/2021       01/15/2021         Marketing Information<br>Category       Application Number or Monograph<br>Citation       Marketing Start       Market<br>Date         NDA       NDA214313       01/15/2021       01/15/2021         NDA       NDA214313       01/15/2021       01/15/2021         NOREPINEPHRINE BITARTRATE<br>horepinephrine bitartrate injection, solution       Kem Code (Source)       NDC:03<br>NDC:03<br>Route of Administration         Active Ingredient/Active Moiety       Ingredient Name       Basis of<br>Strength       S<br>NOREPINEPHRINE BITARTRATE (UNII: IFYSPE32RW) (NOREPINEPHRINE -  |   |  |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|--|
| Item<br>Code       Package Description       Marketing<br>Start Date       Marketing<br>En         1       NDC:0338-<br>0112:20       20 in 1 CARTON       01/15/2021       01/15/2021         1       250 mL in 1 BAG; Type 9: Other Type of Part 3 Combination<br>Product (e.g., Drug/Device/Biological Product)       01/15/2021       0         Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Marketing Start<br>Date       Marketing Start<br>Date       Marketing Start<br>Date         NDA       NDA214313       01/15/2021       01/15/2021       01/15/2021         NOREPINEPHRINE BITARTRATE<br>horepinephrine bitartrate injection, solution       NDC:03<br>Route of Administration       NDC:03<br>Route of Administration       NDC:03<br>Route of Administration       NDC:03<br>Route of Administration       NDC:03<br>Route Ingredient/Active Moiety       S<br>Route Ingredient/Active Ingredient Name       S are for the strength<br>Strength       S are for the strength       S are for the st   | HYDROCHLORIC ACID (UNII: QTT17582CB)          |  |  |  |  |  |  |  |
| Item<br>Code<br>1       Package Description       Marketing<br>Start Date       Marketing<br>End         1       20 in 1 CARTON       01/15/2021       01/15/2021         1       250 mL in 1 BAG; Type 9: Other Type of Part 3 Combination<br>Product (e.g., Drug/Device/Biological Product)       01/15/2021       0         Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Marketing Start       Marketing Start       Marketing Start       Marketing Start       Marketing Start       Marketing Start       Marketing Date       Marketing Start       Ma  |   |  |  |  |  |  |  |  |
| **       Code       Package Description       Start Date       En         1       DC:0338-<br>0112-20       20 in 1 CARTON       01/15/2021       01/15/2021         1       250 mL in 1 BAG; Type 9: Other Type of Part 3 Combination<br>Product (e.g., Drug/Device/Biological Product)       01/15/2021       Image: Combination Product (e.g., Drug/Device/Biological Product)         Marketing Information<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Market<br>Date         NDA       NDA214313       01/15/2021       Image: Category       NDA214313       01/15/2021         NDREPINEPHRINE BITARTRATE       Display (Category)       NDA214313       01/15/2021       Image: Category         NOREPINEPHRINE BITARTRATE       NDA214313       01/15/2021       Image: Category       NDC:03         NOREPINEPHRINE bitartrate injection, solution       Image: Category       NDC:03       Image: Category       NDC:03         Product Type       HUMAN PRESCRIPTION DRUG       Item Code (Source)       NDC:03         Route of Administration       INTRAVENOUS       Sorength       Sorength       Sorength         NOREPINEPHRINE BITARTRATE (UNII: IFYSPE32 RW) (NOREPINEPHRINE -       NOREPINEPHRINE       Sorength       Sorength       Sorength         NOREPINEPHRINE LINGEDISTARTS       Image: Category       NOREPINEPHR   | rketing                                       |  |  |  |  |  |  |  |
| 1       20 IN 1 CARTON       01/13/2021         1       250 mL in 1 BAG; Type 9: Other Type of Part 3 Combination<br>Product (e.g., Drug/Device/Biological Product)       Image: Comparison of Comparison of Comparison of Comparison of Comparison of Citation         Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Marketing Start<br>Date       Marketing Start<br>Date         NDA       NDA214313       01/15/2021       Image: Comparison of Citation       Marketing Category         NDA       NDA214313       01/15/2021       Image: Comparison of Citation of Citation       Image: Comparison of Citation of Citation         NOREPINEPHRINE BITARTRATE       NDA214313       01/15/2021       Image: Comparison of Citation of Citation         Product Information       Product Type       HUMAN PRESCRIPTION DRUG       Item Code (Source)       NDC:03         Route of Administration       INTRAVENOUS       Image: Comparison of Citation of Citation of Citation of Citation       NDC:03         Active Ingredient/Active Moiety       Ingredient Name       Basis of Strength of Strength of Strength of Citation of Ci   | d Date  |  |  |  |  |  |  |  |
| Image: Product (e.g., Drug/Device/Biological Product)         Marketing Information         Marketing Category       Application Number or Monograph Citation       Marketing Start Date       Marketing Start Date         NDA       NDA214313       01/15/2021       Image: Comparison of the start of  |   |  |  |  |  |  |  |  |
| Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Market<br>Date         NDA       NDA214313       01/15/2021       Image: Complex of the second s       |   |  |  |  |  |  |  |  |
| Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Market<br>Date         NDA       NDA214313       01/15/2021       Image: Complex of the start of        |   |  |  |  |  |  |  |  |
| Marketing<br>Category       Application Number or Monograph<br>Citation       Marketing Start<br>Date       Market<br>Date         NDA       NDA214313       01/15/2021       Image: Complex of the second s       |   |  |  |  |  |  |  |  |
| NDA       NDA214313       01/15/2021         NOREPINEPHRINE BITARTRATE       O1/15/2021         NOREPINEPHRINE BITARTRATE       NDC:03         Product Information       HUMAN PRESCRIPTION DRUG       Item Code (Source)       NDC:03         Route of Administration       INTRAVENOUS       Item Code (Source)       NDC:03         Active Ingredient/Active Moiety       Ingredient Name       Basis of Strength       S         NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3ZRW) (NOREPINEPHRINE -       NOREPINEPHRINE       8 m in strength         Inactive Ingredients       Ingredients       S   | ing End                                       |  |  |  |  |  |  |  |
| Product Information         Product Type       HUMAN PRESCRIPTION DRUG       Item Code (Source)       NDC:03         Route of Administration       INTRAVENOUS       Active Ingredient/Active Moiety         Active Ingredient/Active Moiety       Basis of Strength       S         NOREPINEPHRINE BITARTRATE (UNII: IFYSPE3Z RW) (NOREPINEPHRINE -       NOREPINEPHRINE       8 m interest         Inactive Ingredients       Ingredients       Ingredient  |   |  |  |  |  |  |  |  |
| Product Information         Product Type       HUMAN PRESCRIPTION DRUG       Item Code (Source)       NDC:03         Route of Administration       INTRAVENOUS       Active Ingredient/Active Moiety         Active Ingredient/Active Moiety       Basis of Strength       S         NOREPINEPHRINE BITARTRATE (UNII: IFYSPE3Z RW) (NOREPINEPHRINE - NOREPINEPHRINE - Sinter Strength in More Strength in Sinter Strength)       8 min Sinter Strength in Sinter Strength in Sinter Strength in Sinter Strength   |   |  |  |  |  |  |  |  |
| Route of Administration       INTRAVENOUS         Active Ingredient/Active Moiety       Basis of Strength         Ingredient Name       Basis of Strength         NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3ZRW) (NOREPINEPHRINE - NOREPINEPHRINE MOREPINEPHRINE - NOREPINEPHRINE minimum         nactive Ingredients   | norepinephrine bitartrate injection, solution |  |  |  |  |  |  |  |
| Route of Administration       INTRAVENOUS         Active Ingredient/Active Moiety       Basis of Strength         Ingredient Name       Basis of Strength         NOREPINEPHRINE BITARTRATE (UNII: IFYSPE3Z RW) (NOREPINEPHRINE - NOREPINEPHRINE RW)  | 38-0108                                       |  |  |  |  |  |  |  |
| Ingredient Name       Basis of Strength       Strength         NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3Z RW) (NOREPINEPHRINE - UNII: X4W3ENH1CV)       NOREPINEPHRINE -       NOREPINEPHRINE       8 m in the strength         Inactive Ingredients       Norepinephrine -       Norepinephrine -       Norepinephrine -       1 m and the strength   |   |  |  |  |  |  |  |  |
| Ingredient Name       Basis of Strength       S         NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3Z RW) (NOREPINEPHRINE - UNII: X4W3ENH1CV)       NOREPINEPHRINE - NOREPINEPHRINE       8 m in the second sec |   |  |  |  |  |  |  |  |
| Ingredient Name       Strength       Strength         NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3Z RW) (NOREPINEPHRINE - UNII: X4W3ENH1CV)       NOREPINEPHRINE - NOREPINEPHRINE       NOREPINEPHRINE       8 m in the strength         Inactive Ingredients   | Active Ingredient/Active Moiety               |  |  |  |  |  |  |  |
| Inactive Ingredients  | trength                                       |  |  |  |  |  |  |  |
|   | ig<br>250 mL                                  |  |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |  |
| Ingredient Name Strengt   |   |  |  |  |  |  |  |  |
|   | n   |  |  |  |  |  |  |  |
| DEXTROSE MONOHYDRATE (UNII: LX22YL083G)         12.5 g in 250 mL           SODIUM HYDROXIDE (UNII: 55X04QC32I)         12.5 g in 250 mL   |   |  |  |  |  |  |  |  |
| HYDROCHLORIC ACID (UNII: QTT17582CB)  |   |  |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |  |
| Packaging   |   |  |  |  |  |  |  |  |
|   | rketing<br>d Date                             |  |  |  |  |  |  |  |
| NDC:0338-<br>0108-20         20 in 1 CARTON         01/15/2021  |   |  |  |  |  |  |  |  |
| 250 mL in 1 CONTAINER; Type 9: Other Type of Part 3 Combination   |   |  |  |  |  |  |  |  |
| Product (e.g., Drug/Device/Biological Product)  |   |  |  |  |  |  |  |  |

|  | Marketing Application Number or Monograph<br>Category Citation |                                   |  |                      | ting Start<br>Date   | Ma            | arketing End<br>Date  |
|--|--|-----------------------------------|--|----------------------|----------------------|---------------|-----------------------|
| NDA  | NDA214313  |                                   |  | 01/15/2021 Date Date |                      |               | Date                  |
|  |  |                                   |  |                      |                      |               |                       |
|  |  |                                   | TADTDATE   |                      |                      |               |                       |
|  |  |                                   | TARTRATE<br>ction, solution                                    |                      |                      |               |                       |
|  |  |                                   |  |                      |                      |               |                       |
| Product I  | nform  | nation                            |  |                      |                      |               |                       |
| Product Ty   | pe   |                                   | HUMAN PRESCRIPTION DRUG  | ltem Cod             | e (Source)           | NDC:0338-0116 |                       |
| Route of A   | dminist  | tration                           | INTRAVENOUS  |                      |                      |               |                       |
|  |  |                                   |  |                      |                      |               |                       |
| Active In  | aredie   | nt/Active                         | Moiety   |                      |                      |               |                       |
| i cuve mų  |  |                                   | -  |                      | Basis of             |               | Stronget              |
| Ingredient Name  |  |                                   |  |                      | Strengt              | า             | Strength              |
| NOREPINEPHRINE BITARTRATE (UNII: IFY5PE3ZRW) (NOREPINEPHRINUNII:X4W3ENH1CV)            |  |                                   |  | NE -                 | NOREPINEPHRI         | NE            | 16 mg<br>in 250 mL    |
|  |  |                                   |  |                      |                      |               |                       |
| Inactive I   | nared  | ients                             |  |                      |                      |               |                       |
|  |  |                                   | gredient Name  |                      |                      | Str           | ength                 |
| DEXTROSE MONOHYDRATE (UNII: LX22YL083G)  |  |                                   |  | 12.5 g in 250 mL     |                      |               |                       |
|  |  | <b>E</b> (UNII: 55X04             |  |                      |                      |               |                       |
| HYDROCHLO  | ORIC ACI   | ID (UNII: QTT1                    | 7582CB)  |                      |                      |               |                       |
|  |  |                                   |  |                      |                      |               |                       |
|  | g  |                                   |  |                      |                      |               |                       |
| Packagın   |  | Package Description               |  |                      | Marketin<br>Start Da |               | Marketing<br>End Date |
| ltere  |  |                                   |  |                      |                      |               |                       |
| # Item<br>Code   | 20 in 1  | L CARTON                          |  |                      | 11/21/2023           |               |                       |
| Item<br>Code           1         NDC:0338-<br>0116-20                                  | 20 m 2   | L in 1 BAG; Ty                    | /pe 9: Other Type of Part 3 Comb                               | ination              | 11/21/2023           |               |                       |
| # Item<br>Code<br>1 NDC:0338-<br>0116-20   | 20 m 2   | L in 1 BAG; Ty                    | /pe 9: Other Type of Part 3 Comb<br>Device/Biological Product) | ination              | 11/21/2023           |               |                       |
| Item<br>Code           NDC:0338:<br>0116-20  | 20 m 2   | L in 1 BAG; Ty                    |  | ination              | 11/21/2023           |               |                       |
| Item<br>Code           1         NDC:0338<br>0116-20           1                       | 250 m<br>Produc  | L in 1 BAG; Ty                    | Device/Biological Product)                                     | ination              | 11/21/2023           |               |                       |
| <ul> <li>Code</li> <li>NDC:0338-<br/>0116-20</li> <li>NDC:0338-<br/>0116-20</li> </ul> | 250 m<br>Product   | L in 1 BAG; Ty<br>ct (e.g., Drug/ | Device/Biological Product)                                     | Marke                | ting Start<br>Date   | Ma            | arketing End<br>Date  |

Labeler - Baxter Healthcare Corporation (005083209)

## Establishment

| Name                         | Address | ID/FEI | Business Operations  |
|------------------------------|---------|--------|--|
| Baxter<br>Healthcare<br>S.A. |         |        | ANALYSIS(0338-0112, 0338-0108, 0338-0116), MANUFACTURE(0338-0112, 0338-0108, 0338-0116), LABEL(0338-0112, 0338-0108, 0338-0116), PACK(0338-0112, 0338-0108, 0338-0116), STERILIZE(0338-0112, 0338-0108, 0338-0116) |

# Establishment

| Name                  | Address | ID/FEI    | Business Operations                       |
|-----------------------|---------|-----------|---|
| Bieffe Medital S.p.A. |         | 437668413 | ANALYSIS(0338-0112, 0338-0108, 0338-0116) |

Revised: 11/2023

Baxter Healthcare Corporation