

# Potassium Chloride in 5% Dextrose Injection, USP in Plastic Container

## VIAFLEX Plus Container

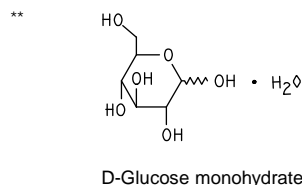
### DESCRIPTION

Potassium Chloride in 5% Dextrose Injection, USP is a sterile, nonpyrogenic solution for fluid and electrolyte replenishment and caloric supply in a single dose container for intravenous administration. It contains no antimicrobial agents. Composition, osmolarity, pH, ionic concentration and caloric content are shown in Table 1.

**Table 1**

	Size (mL)	Composition (g/L)		*Osmolarity (mOsmol/L) (calc.)	pH	Ionic Concentration (mEq/L)		Caloric Content (kcal/L)
		**Dextrose Hydrous, USP	Potassium Chloride, USP (KCl)			Potassium	Chloride	
Potassium Chloride in 5% Dextrose Injection, USP								
mEq Potassium								
10 mEq	1000	50	0.75	272	4.5 (3.5 to 6.5)	<b>10</b>	10	170
20 mEq	1000	50	1.5	293	4.5 (3.5 to 6.5)	<b>20</b>	20	170
30 mEq	1000	50	2.24	312	4.5 (3.5 to 6.5)	<b>30</b>	30	170
40 mEq	1000	50	3	333	4.5 (3.5 to 6.5)	<b>40</b>	40	170
20 mEq	500							

\*Normal physiologic osmolarity range is approximately 280 to 310 mOsmol/L.



This VIAFLEX Plus plastic container is fabricated from a specially formulated polyvinyl chloride (PL 146 Plastic). VIAFLEX Plus on the container indicates the presence of a drug additive in a drug vehicle. The VIAFLEX Plus plastic container system utilizes the same container as the VIAFLEX plastic container system. The amount of water that can permeate

from inside the container into the overwrap is insufficient to affect the solution significantly. Solutions in contact with the plastic container can leach out certain of its chemical components in very small amounts within the expiration period, e.g., di-2- ethylhexyl phthalate (DEHP), up to 5 parts per million. However, the safety of the plastic has been confirmed in tests in animals according to USP biological tests for plastic containers as well as by tissue culture toxicity studies.

## **CLINICAL PHARMACOLOGY**

Potassium Chloride in 5% Dextrose Injection, USP is a source of water, electrolytes and calories. It is capable of inducing diuresis depending on the clinical condition of the patient.

## **INDICATIONS AND USAGE**

Potassium Chloride in 5% Dextrose Injection, USP is indicated as a source of water, electrolytes, and calories.

## **CONTRAINDICATIONS**

Solutions containing dextrose may be contraindicated in patients with known allergy to corn or corn products.

## **WARNINGS**

Potassium Chloride in 5% Dextrose Injection, USP should be used with great care, if at all, in patients with hyperkalemia, severe renal failure, and in conditions in which potassium retention is present.

Injections containing carbohydrates with low electrolyte concentration should not be administered simultaneously with blood through the same administration set because of the possibility of pseudoagglutination or hemolysis. The bag label for these injections bears the statement: Do not administer simultaneously with blood.

The intravenous administration of Potassium Chloride in 5% Dextrose Injection, USP can cause fluid and/or solute overloading resulting in dilution of serum electrolyte concentrations, overhydration, congested states, or pulmonary edema. The risk of dilutional states is inversely proportional to the electrolyte concentrations of the injection. The risk of solute overload causing congested states with peripheral and pulmonary edema is directly proportional to the electrolyte concentrations of the injection.

In patients with diminished renal function, administration of Potassium Chloride in 5% Dextrose Injection, USP may result in potassium retention.

In very low birth weight infants, excessive or rapid administration of dextrose injection may result in increased serum osmolality and possible intracerebral hemorrhage.

Potassium salts should never be administered by IV push.

Monitor changes in fluid balance, electrolyte concentrations, and acid base balance during prolonged parenteral therapy or whenever the condition of the patient warrants such evaluation.

## **PRECAUTIONS**

### **General**

Do not connect flexible plastic containers in series in order to avoid air embolism due to possible residual air contained in the primary container.

Such use could result in air embolism due to residual air being drawn from the primary container before administration of the fluid from the secondary container is completed.

Pressurizing intravenous solutions contained in flexible plastic containers to increase flow rates can result in air embolism if the residual air in the container is not fully evacuated prior to administration.

Use of a vented intravenous administration set with the vent in the open position could result in air embolism. Vented intravenous administration sets with the vent in the open position should not be used with flexible plastic containers.

Potassium Chloride in 5% Dextrose Injection, USP should be used with caution in patients with overt or subclinical diabetes mellitus.

For patients receiving potassium supplement at greater than maintenance rates, frequent monitoring of serum potassium levels and serial EKGs are recommended.

The osmolarity of Potassium Chloride in 5% Dextrose Injection, USP ranges from 272 to 333 mOsmol/L (calc). Administration of hypertonic solutions may cause venous irritation, including phlebitis. Hyperosmolar solutions should be administered with caution, if at all, to patients with hyperosmolar states.

### **Pregnancy**

#### *Pregnancy Category C*

There are no adequate and well controlled studies with Potassium Chloride in 5% Dextrose Injection, USP and animal reproduction studies have not been conducted with this drug. Therefore, it is not known whether Potassium Chloride in 5% Dextrose Injection, USP can cause fetal harm when administered to a pregnant woman. Potassium Chloride in 5% Dextrose Injection, USP should be given during pregnancy only if the potential benefit justifies the potential risk to the fetus.

## Labor and Delivery

Intrapartum maternal intravenous infusion of glucose-containing solutions may produce maternal hyperglycemia with subsequent fetal hyperglycemia and fetal metabolic acidosis. Fetal hyperglycemia can result in increased fetal insulin levels which may result in neonatal hypoglycemia following delivery. Consider the potential risks and benefits for each specific patient before administering Potassium Chloride in 5% Dextrose Injection, USP.

## Nursing Mothers

It is not known whether this drug is present in human milk. Because many drugs are present in human milk, caution should be exercised when Potassium Chloride in 5% Dextrose Injection, USP is administered to a nursing woman.

## Pediatric Use

The use of Potassium Chloride in 5% Dextrose Injection, USP in pediatric patients is based on clinical practice. (See **DOSAGE AND ADMINISTRATION**)

Newborns – especially those born premature and with low birth weight - are at increased risk of developing hypo- or hyperglycemia and therefore need close monitoring during treatment with intravenous glucose solutions to ensure adequate glycemic control in order to avoid potential long term adverse effects. Hypoglycemia in the newborn can cause prolonged seizures, coma and brain damage. Hyperglycemia has been associated with intraventricular hemorrhage, late onset bacterial and fungal infection, retinopathy of prematurity, necrotizing enterocolitis, bronchopulmonary dysplasia, prolonged length of hospital stay, and death.

## Geriatric Use

Clinical studies of Potassium Chloride in 5% Dextrose Injection, USP 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.

This drug is known to be substantially excreted by the kidney, and the risk of toxic reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function.

## ADVERSE REACTIONS

Hypersensitivity reactions, including anaphylaxis and chills.

Reactions which may occur because of the solution or the technique of administration include febrile response, infection at the site of injection, venous thrombosis or phlebitis extending from the site of injection, extravasation, and hypervolemia.

If an adverse reaction does occur, discontinue the infusion, evaluate the patient, institute appropriate therapeutic countermeasures, and save the remainder of the fluid for examination if deemed necessary.

## DOSAGE AND ADMINISTRATION

As directed by a physician. Dosage is dependent upon the age, weight and clinical condition of the patient as well as laboratory determinations.

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration whenever solution and container permit. Use of a final filter is recommended during administration of all parenteral solutions, where possible.

Do not administer unless solution is clear and seal is intact.

All injections in VIAFLEX Plus plastic containers are intended for intravenous administration using sterile equipment.

The dosage selection and constant infusion rate of intravenous dextrose must be selected with caution in pediatric patients, particularly neonates and low birth weight infants, because of the increased risk of hyperglycemia/hypoglycemia. Frequent monitoring of serum glucose concentrations is required when dextrose is prescribed to pediatric patients, particularly neonates and low birth weight infants. The infusion rate and volume depends on the age, weight, clinical and metabolic conditions of the patient, concomitant therapy and should be determined by the consulting physician experienced in pediatric intravenous fluid therapy.

Additives may be incompatible. Complete information is not available. Those additives known to be incompatible should not be used. Consult with pharmacist, if available. If, in the informed judgment of the physician, it is deemed advisable to introduce additives, use aseptic technique. Mix thoroughly when additives have been introduced. Do not store solutions containing additives.

## HOW SUPPLIED

Potassium Chloride in 5% Dextrose Injection, USP in VIAFLEX Plus plastic container is available as follows:

Code	Size (mL)	NDC	Product Name
2B1124	1000	0338-0681-04	10 mEq Potassium Chloride in 5% Dextrose Injection, USP
2B1134	1000	0338-0683-04	20 mEq Potassium Chloride in 5% Dextrose Injection, USP
2B1174	1000	0338-0685-04	30 mEq Potassium Chloride in 5% Dextrose Injection, USP
2B1264	1000	0338-0687-04	40 mEq Potassium Chloride in 5% Dextrose Injection, USP
2B1263	500	0338-0687-03	20 mEq Potassium Chloride in 5% Dextrose Injection, USP

Exposure of pharmaceutical products to heat should be minimized. Avoid excessive heat. It is recommended the product be stored at room temperature (25°C); brief exposure up to 40°C does not adversely affect the product.

## DIRECTIONS FOR USE OF VIAFLEX PLUS PLASTIC CONTAINER

For information on risk of air embolism – see **PRECAUTIONS**.

### To Open

Tear overwrap down side at slit and remove solution container. Visually inspect the container. If the outlet port protector is damaged, detached, or not present, discard container as solution path sterility may be impaired. Some opacity of the plastic due to moisture absorption during the sterilization process may be observed. This is normal and does not affect the solution quality or safety. The opacity will diminish gradually. Check for minute leaks by squeezing inner bag firmly. If leaks are found, discard solution as sterility may be impaired. If supplemental medication is desired, follow directions below.

### Preparation for Administration

1. Suspend container from eyelet support.
2. Remove protector from outlet port at bottom of container.
3. Attach administration set. Refer to complete directions accompanying set.

## **To Add Medication**

**Warning:** Additives may be incompatible.

### **To add medication before solution administration**

1. Prepare medication site.
2. Using syringe with 19 to 22 gauge needle, puncture resealable medication port and inject.
3. Mix solution and medication thoroughly. For high density medication such as potassium chloride, squeeze ports while ports are upright and mix thoroughly.

### **To add medication during solution administration**

1. Close clamp on the set.
2. Prepare medication site.
3. Using syringe with 19 to 22 gauge needle, puncture resealable medication port and inject.
4. Remove container from IV pole and/or turn to an upright position.
5. Evacuate both ports by squeezing them while container is in the upright position.
6. Mix solution and medication thoroughly.
7. Return container to in use position and continue administration.

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