CEFTATIME-SB

(Ceftriaxone and Sulbactam for Injection)

1. NAME OF MEDICINAL PRODUCT

CEFTATIME-SB 375 (Ceftriaxone and Sulbactam for Injection)

CEFTATIME-SB 1.5 (Ceftriaxone and Sulbactam for Injection)

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

CEFTATIME-SB 375: Each vial contains Ceftriaxone Sodium USP (Sterile) equivalent to Ceftriaxone 250 mg and Sulbactam Sodium USP (Sterile) equivalent to Sulbactam 125 mg.

CEFTATIME-SB 1.5: Each vial contains Ceftriaxone Sodium USP (Sterile) equivalent to Ceftriaxone 1000 mg and Sulbactam Sodium USP (Sterile) equivalent to Sulbactam 500 mg.

3. PHARMACEUTICAL FORMS

Dry Powder for Injection (White to off white crystalline powder. After reconstitution with sterile water for injections, it forms colourless to pale yellow colour solution.)

* Not all presentations are available in every country.

4. CLINICAL PARTICULARS

4.1 Therapeutic Indications

Ceftriaxone & Sulbactam for Injection is indicated in the treatment of the below mentioned infections:

- **Lower Respiratory Tract Infections** caused by *Streptococcus pneumoniae, Staphylococcus aureus, Haemophilus influenzae, Haemophilus parainfluenae, Klebsiella pneumoniae, Escherichia coli, Enterobacter aerogenes, Proteus mirabilis* or *Serratia marcoscens.*
- **Acute Bacterial Otitis Media** caused by *Streptococcus pneumoniae, Haemophilus influenzae (including β-lactamase producing strains) or Moraxella catarrhalis (including β-lactamase producing strains).*
- **Skin And Skin Structure Infections** caused by *Staphylococcus aureus, Staphylococcus epidermidis, Streptococcus pyrogenes,* Viridans group *Streptococci, Escherichia coli, Enterobacter cloacae, Klebsiella pneumoniae, Proteus mirabilis, Morganella morganii, Pseudomonas aerugenosa, Serratia marcescens, Acinetobacter calcoaceficus, Bacteroides fragilis* or *Peptostreptococcus* species.
- **Urinary Tract Infections** (*complicated and uncomplicated*) caused by *Escherichia coli, Proteus vulgaris, Morganella morganii* or *Klebsiella pneumoniae.*
- **Uncomplicated Gonorrhea** (cervical/urethral and rectal) caused by *Neisseria gonorrhoeae,* including both penicillinase- and nonpenicillinase-producing strains, and pharyngeal gonorrhea caused by nonpenicillinase-producing strains of Neisseria gonorrhoeae.
- **Pelvic Inflammatory Disease** *caused by Neisseria gonorrhoeae.* Ceftriaxone, like other cephalosporins, has no activity against *Chlamydia trachomatis.* Therefore, when cephalosporins are used in the treatment of patients with pelvic inflammatory disease and *Chlamydia trachomatis* is one of the suspected pathogens, appropriate antichlamydial coverage should be added.
- **Bacterial Septicemia** caused by *Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Haemophilus influenzae* or *Klebsiella pneumoniae.*
- **Bone and Joint Infections** caused by *Staphylococcus aureus, Streptococcus pneumoniae, Escherichia coli, Proteus mirabilis, Klebsiella pneumoniae* or *Enterobacter* species.
- **Intra-Abdominal Infections** caused by *Escherichia coli, Klebsiella pneumoniae, Bacteroides fragilis, Clostridium* species (Note: most strains of *Clostridium difficile* are resistant) or *Peptostreptococcus* species.
- **Meningitis** caused by *Haemophilus influenzae, Neisseria meningitidis* or *Streptococcus pneumoniae*.
- **Surgical Prophylaxis:** The preoperative administration of a single 1 g dose of Ceftriaxone and Sulbactam may reduce the incidence of postoperative infections in patients undergoing surgical procedures classified as contaminated or potentially contaminated (e.g. vaginal or abdominal hysterectomy or cholecystectomy for chronic calculous cholecystitis in high-risk patients, such as those over 70 years of age, with acute cholecystitis not requiring therapeutic antimicrobials, obstructive jaundice or common duct bile stones) and in surgical patients for whom infection at the operative site would present serious risk (e.g. during coronary artery bypass surgery).

4.2 Dosage and Administration

To reduce the development of drug-resistant bacteria and maintain the effectiveness of Ceftriaxone and other antibacterial drugs,

Ceftriaxone should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria.

Ceftriaxone and Sulbactam for Injection may be administered intramuscularly or intravenously, after reconstitution of the solution.

Diluents containing calcium, (e.g. Ringer's solution or Hartmann's solution), should not be used to reconstitute or to further dilute a reconstituted vial for IV administration because a precipitate can form. Precipitation of Ceftriaxone-calcium can also occur when Ceftriaxone is co-administered with calcium-containing solutions in the same IV administration line. Therefore, Ceftriaxone and calcium-containing solutions must not be mixed or administered simultaneously.

The dose and frequency of Ceftriaxone & Sulbactam for Injection depends on the severity and localization of the infection and expected pathogens.

Adults and Adolescent Patients

The usual adult daily dose is 1 to 2 g given once a day (or in equally divided doses twice a day) depending upon the type and severity of infection. The total daily dose should not exceed 4 g.

For the treatment of uncomplicated gonococcal infections a single intramuscular dose of 250 mg is recommended.

For preoperative use (surgical prophylaxis) a single dose of 1 g administered intravenously ½ to 2 hours before surgery is recommended.

The dosage calculation is on the basis of Ceftriaxone content.

Pediatric Patients

For the treatment of skin and skin structure infections the recommended total daily dose is 50 to 75 mg / kg given once a day (or in equally divided doses twice a day). The total daily dose should not exceed 2 g.

For the treatment of acute bacterial otitis media a single intramuscular dose of 50 mg / kg (not to exceed 1 g) is recommended.

For the treatment of serious miscellaneous infections other than meningitis, the recommended total daily dose is 50 to 75 mg / kg given in divided doses every 12 hours. The total daily dose should not exceed 2 g.

In the treatment of meningitis, it is recommended that the initial therapeutic dose be 100 mg / kg (not to be exceed 4 g). Thereafter a total daily dose of 100 mg / kg / day (not to exceed 4 g daily) is recommended. The daily dose may be administered once a day (or in equally divided doses every 12 hours). The usual duration of therapy is 7 - 14 days.

Neonates

Hyperbilirubinemic neonates, especially prematures, should not be treated with Ceftriaxone & Sulbactam for Injection.

In the neonates, the intravenous dose should be given over 60 minutes to reduce the displacement of bilirubin from albumin, thereby reducing the potential risk of bilirubin encephalopathy.

Renal & Hepatic Impairment

Dosage regimen of Ceftriaxone & Sulbactam for Injection therapy should be adjusted in patients with marked decrease in renal function (creatinine clearance less than 30 ml/min) to compensate for the reduced clearance of Sulbactam. Patients with creatinine clearances between 15 & 30 ml/min should receive a maximum of 1g of Sulbactam administered every 12 hours (maximum daily dosage of 2g Sulbactam), while patients with creatinine clearances of less than 15ml/min should receive a maximum of 500 mg of Sulbactam every 12 hours (maximum daily dosage of 1g Sulbactam). In severe infections it may be necessary to administer additional Ceftriaxone.

The pharmacokinetic profile of Sulbactam is significantly altered by hemodilaysis. Thus dosing should be scheduled to follow a dialysis period. No dosage adjustment of Ceftriaxone is necessary for patients with impairment of renal or hepatic function; however, blood levels of Ceftriaxone should be monitored in patients with severe renal impairment (eg: dialysis patients) and in patients with both renal and hepatic

dysfunction.

Ceftriaxone therapy should be continued for at least 2 days after the sign and symptoms of infection have disappeared. The usual dosage duration of therapy is 4 - 14 days in complicated infections, longer therapy may be required.

When treating infections caused by *Streptococcus pyogenes*, therapy should be continued for at least 10 days.

Mode of Administration: For Intravenous (IV) & Intramuscular (IM) use.

Product Name	For I.V. administration	For I.M. administration
CEFTATIME-SB 375	Dissolve the contents in 3.0 ml of Sterilized Water for Injections.	Dissolve the contents in 1.0 ml of Sterilized Water for Injections.
CEFTATIME-SB 1.5	Dissolve the contents in 9.6 ml of Sterilized Water for Injections.	Dissolve the contents in 3.6 ml of Sterilized Water for Injections.

The reconstituted solution should be used immediately after preparation. Do not use if the reconstituted solution is not clear or has suspended matter.

4.3 Contraindications

Ceftriaxone and Sulbactam for Injection is contraindicated in patients with known allery to penicillin, any other type of β-lactam drug, cephalosporin class of antibiotics, β-lactamase inhibitors or any other ingredients of this formulation.

Neonates (≤28 days)

Hyperbilirubinemic neonates, especially premature, should not be treated with Ceftriaxone. In vitro studies have shown that Ceftriaxone can displace bilirubin from its binding to serum albumin and bilirubin encephalopathy can possibly develop in these patients.

Ceftriaxone & Sulbactam for Injection must not be co-administered with calcium containing IV solutions, including continous calcium-containing infusions such as parenteral nutrition, in neonates because of the risk of precipitation of Ceftriaxone-Calcium salt. Cases of fatal reactions with Ceftriaxone Calcium precipitates in lung & kidneys in neonates have been described. In some cases the infusion lines and the time of administration of Ceftriaxone & calcium containing solutions differed.

4.4 Special Warnings and Precautions for use

Hypersensitivity Reactions: As with other cephalosporins, anaphylactic reactions with fatal outcome were also reported, even if a patient is not known to be allergic or previously exposed. Before therapy with Ceftriaxone is instituted, careful inquiry should be made to determine whether the patient has had any previous hypersensitivity reactions to Ceftriaxone, any other cephalosporin, or to any penicillin or other beta-lactam drug. Ceftriaxone is contraindicated in patients who have had a previous hypersensitivity reaction to any cephalosporin. It is also contraindicated in patients who have had a previous immediate and/or any severe hypersensitivity reaction to any penicillin or to any other beta-lactam drug. Ceftriaxone should be given with caution to patients who have had any other type of hypersensitivity reaction with penicillin or any other beta-lactam drug.

Interaction with Calcium-containing Products: Cases of fatal reactions with calcium-Ceftriaxone precipitates in lungs and kidneys in premature and full-term newborns aged less than 1 month have been described. In patients of any age Ceftriaxone must not be mixed or administered simultaneously with any calcium-containing IV solutions, even via different infusion lines or at different infusion sites. However, in patients older than 28 days of age Ceftriaxone and calcium-containing solutions may be administered sequentially one after another if infusion lines at different sites are used or if the infusion lines are replaced or thoroughly flushed between infusions with physiological salt-solution to avoid precipitation.

Clostridium difficile: *Clostridium difficile* associated diarrhoea (CDAD) has been reported with use of nearly all antibacterial agents, including Ceftriaxone, and may range in severity from mild diarrhoea to fatal colitis. CDAD must be considered in all patients who present with diarrhoea following antibiotic use. Careful medical history is necessary since CDAD has been reported to occur over two months after the administration of antibacterial agents.

If CDAD is suspected or confirmed, ongoing antibiotic use not directed against *C. difficile* may need to be discontinued. Appropriate fluid and electrolyte management, protein supplementation, antibiotic treatment of *C. difficile*, and surgical evaluation should be instituted as clinically indicated.

An immune mediated haemolytic anaemia has been observed in patients receiving cephalosporin class antibacterials including Ceftriaxone. If a patient develops anaemia while on Ceftriaxone, the diagnosis of a cephalosporin associated anaemia should be considered and Ceftriaxone discontinued until the aetiology is determined.

Antibiotic-associated diarrhoea, colitis and pseudomembranous colitis have all been reported with the use of Ceftriaxone. These diagnoses should be considered in any patient who develops diarrhoea during or shortly after treatment. Ceftriaxone should be discontinued if severe and/or bloody diarrhoea occurs during treatment and appropriate therapy instituted.

Ceftriaxone & Sulbactam for Injection should be used with caution in individuals with a previous history of gastro-intestinal disease, particularly colitis.

As with other cephalosporins, prolonged use of Ceftriaxone may result in the overgrowth of non-susceptible organisms, such as *enterococci* and *Candida spp.*

In severe renal and hepatic insufficiency, dosage should be reduced according to given recommendations.

Ceftriaxone may precipitate in the gallbladder and then be detectable as shadows on ultrasound. This can happen in patients of any age, but is more likely in infants and small children who are usually given a larger dose of Ceftriaxone on a body weight basis. In children, doses greater than 80mg/kg body weight should be avoided because of the increased risk of biliary precipitates. As the condition appears to be transient and reversible upon discontinuation, therapeutic procedures are not normally indicated.

During prolonged treatment a complete blood count should be performed at regular intervals.

In case lidocaine is used as a solvent Ceftriaxone solutions should only be used for intramuscular injection.

Prescribing Ceftriaxone in the absence of a proven or strongly suspected bacterial infection or prophylactic indications is unlikely to provide benefit to the patient and increase the risk of the development of drug-resistant bacteria.

Prolonged use of Ceftriaxone may result in overgrowth of non-susceptible organisms. If super-infection occurs to the patient during therapy, appropriate measures should be taken.

4.5 Interactions with other medicinal products and other form of interaction

Diuretics: No impairment of renal function has been observed in man after simultaneous administration of Ceftriaxone with diuretics.

Aminoglycosides: No interference with the action of increase in the nephrotoxicity of aminoglycosides has been observed during simultaneous administration with Ceftriaxone.

Alcohol: The Ceftriaxone molecule does not contain the N-methylthio-tetrazole substituent, which has been associated with a disulfiram like effects, when alcohol is taken during therapy with certain cephalosporins.

Chloramphenicol: In vitro, Chloramphenicol has been shown to be antagonistic with respect to Ceftriaxone & other Cephalosporins. The clinical relevance of these findings in unknown, but caution is advised if concurrent administration of Ceftriaxone with chloramphenicol is proposed.

Coomb's test: In patients treated with Ceftriaxone, the Coomb's test may rarely become false positive. Ceftriaxone, like other antibiotics, may result in false positive test for galactosaemia. Likewise, non-enzymatic methods for glucose determination in urine may give false-positive results. For this reason, urine-glucose determination during therapy with Ceftriaxone should be done enzymatically.

Oral contraceptives: Ceftriaxone may adversely affect the efficacy of oral hormonal contraceptives. Consequently, it is advisable to use supplementary (non-hormonal) contraceptive measures during treatment and in the month following treatment.

Probenecid: Probenecid decreases the renal tubular secretion of Sulbactam. Concurrent use of probenecid with Ceftriaxone & Sulbactam for Injection may results in increased and prolonged blood levels of Sulbactam.

4.6 Pregnancy and Lactation

Use in Pregnancy:

Pregnancy Category B. No adequate and well-controlled studies in pregnant women are available. Because animal reproductive studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Use in Lactation:

Low concentrations of Ceftriaxone & Sulbactam are excreted in the human milk and hence caution should be exercised when Ceftriaxone & Sulbactam for Injection is administered to the nursing mother.

4.7 Effect on ability to drive and use machines

Since Ceftriaxone sometimes induces dizziness, it may have an effect on ability to drive and use machines.

4.8 Undesirable Effects

Ceftriaxone and Sulbactam are generally well tolerated. The most frequently reported adverse events for Ceftriaxone are diarrhoea, nausea and vomiting. Other reported adverse events include hypersensitivity reactions such as allergic skin reactions and anaphylactic reactions, secondary infections with yeast, fungi or resistant organisms as well as changes in blood cell counts.

4.9 Overdosage

In the case of overdose nausea, vomiting, diarrhoea can occur. Ceftriaxone concentration cannot be reduced by haemodialysis or peritoneal dialysis. There is no specific antidote. Treatment of over dosage should be symptomatic.

Nurological adverse reactions, including convulsions, may occur with the attainment of high CSF levels of β-lactams.

The molecular weight, degree of protein-binding and pharmacokinetics profile of Sulbactam suggest that this compound may be removed by hemodialysis.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamics Properties

Pharmacotherapeutic group: Cephalosporins & related substances, J01DA13

Mechanism of Action:

Ceftriaxone binds to one or more of the penicillin-binding proteins (PBPs) which inhibits the final transpeptidation step of peptidoglycan synthesis in bacterial cell wall, thus inhibiting biosynthesis and arresting cell wall assembly resulting in bacterial cell death. Ceftriaxone is stable to a broad range of bacterial β-lactamases and is active against a broad spectrum of bacterial pathogens including both Gram-positive and Gram-negative species.

Sulbactam, a beta-lactam structurally related to penicillins, is an inhibitor of many beta-lactamases which commonly cause resisitance to penicillin's and cephalosporins but it does not inhibit AmpC enzymes or metallo beta-lactamases. Sulbactam extends the antibiotic spectrum of Ceftriaxone to include many beta-lactamases producing bacteria that have acquired resistance to Ceftriaxone.

5.2 Pharmacokinetics Properties

Absorption

Average plasma concentrations of Ceftriaxone following a single 30 - minute intravenous (IV) infusion of a 1 gm dose and intramuscular (IM) administration of a single 1 gm dose in healthy subjects are presented in Table 1.

Table 1: Ceftriaxone Plasma Concentrations after Single Dose Administration

Dose / Route	Average Plasma Concentrations (µg / mL)								
	0.5 hr	1 hr	2 hr	4 hr	6 hr	8 hr	12 hr	16 hr	24 hr
1 gm IV *	151	111	88	67	53	43	28	18	9
1 gm IM	40	68	76	68	56	44	29	ND	ND

*IV doses were infused at a constant rate over 30 minutes. ND = Not determined.

Ceftriaxone was completely absorbed following IM administration with mean maximum plasma concentrations occurring between 2 and 3 hours post-dose. Multiple IV or IM doses ranging from 0.5 to 2 gm at 12- to 24 hour intervals resulted in 15% to 36% accumulation of Ceftriaxone above single dose values.

Sulbactam dose (mg)	Phamacokinetic Parameters		
	$T_{1/2}$ (h)	Cmax (µg/ml)	AUC(µg h/ml)
500	0.96	31.1	28.9

After a 30 min infusion of 500 mg of sulbactam , a peak serum concentration of approximately 20 µg/ml was obtained. Half life of Sulbactam in humans is approximately 1 hour.

Elimination - Ceftriaxone concentrations in urine are shown in Table 2.

Table 2: Urinary Concentrations of Ceftriaxone after Single Dose Administration

Dose / Route	Average Plasma Concentrations (µ g/mL)					
	0 - 2 hr.	2 - 4 hr.	4 - 8 hr.	8 - 12 hr.	12 - 24 hr.	24 - 28 hr.
1 gm IV	995	855	293	147	132	32
1 gm IM	504	628	418	237	ND	ND

ND = Not determined

Thirty-three percent to 67% of a Ceftriaxone dose was excreted in the urine as unchanged drug and the remainder was secreted in the bile and ultimately found in the feces as microbiologically inactive compounds. After a 1 gm IV dose, average concentrations of Ceftriaxone, determined from 1 to 3 hours after dosing, were 581 µg / mL in the gallbladder bile, 788 µg / mL in the common duct bile, 898 µg / mL in the cystic duct bile, 78.2 µg / gm in the gallbladder wall and 62.1 µg / mL in the concurrent plasma.

Over a 0.15 to 3 gm dose range in healthy adult subjects, the values of elimination half-life ranged from 5.8 to 8.7 hours; apparent volume of distribution from 5.78 to 13.5 L; plasma clearance from 0.58 to 1.45 L/hour; and renal clearance from 0.32 to 0.73 L/hour.

Ceftriaxone is reversibly bound to human plasma proteins, and the binding decreased from a value of 95% bound at plasma concentrations of <25 µg/mL to a value of 85% Bound at 300 µg/mL. Ceftriaxone crosses the blood placenta barrier.

Sulbactam appears to equilibrate rapidly between the serum and the peripheral compartment. The apparent volume of distribution of the central compartment of 9 to 16 liters is in the range of total extracellular fluid in humans (approximately 15 liters) and suggest that sulbactam is widely distributed in the extracellular fluid. Approximately 75% of Sulbactam is excreted unchanged in urine.

***Paediatric Population* -** The average values of maximum plasma concentration, elimination half-life, plasma clearance and volume of distribution after a 50 mg/kg IV dose and after a 75 mg/kg IV dose in pediatric patients suffering from bacterial meningitis are shown in Table 3. Ceftriaxone penetrated the inflamed meninges of infants and pediatric patients; CSF concentrations after a 50 mg/kg IV dose and after a 75 mg/kg IV dose are also shown in Table 3.

Table 3: Average Pharmacokinetic Parameters of Ceftriaxone in Pediatric Patients with Meningitis

Pharmacokinetic Parameters	50 mg/kg IV	75 mg/kg IV
Maximum Plasma Concentrations (µ g / mL)	216	275
Elimination Half - life (hr.)	4.6	4.3
Plasma Clearance (mL / hr. / kg)	49	60

Pharmacokinetic Parameters	50 mg/kg IV	75 mg/kg IV
Volume of Distribution (mL / kg)	338	373
CSF Concentration-inflamed meninges (µg / mL)	5.6	6.4
Range (µg / mL)	1.3-18.5	1.3-44
Time after dose (hr.)	3.7 (± 1.6)	3.3 (± 1.4)

Special Population **-** Compared to that in healthy adult subjects, the pharmacokinetics of Ceftriaxone were only minimally altered in elderly subjects and in patients with renal impairment or hepatic dysfunction (Table 4); therefore, dosage adjustments are not necessary for these patients with Ceftriaxone dosages up to 2 gm per day. Ceftriaxone was not removed to any significant extent from the plasma by hemodialysis; in six of 26 dialysis patients, the elimination rate of Ceftriaxone was markedly reduced.

Table 4: Average Pharmacokinetic Parameters of Ceftriaxone in Humans

Subject Group	Elimination Half-Life (hr)	Plasma Clearance (L/hr)	Volume of Distribution (L)
Healthy Subjects	5.8-8.7	0.58-1.45	5.8-13.5
Elderly Subjects (mean age, 70.5 yr)	8.9	0.83	10.7
Patients With Renal Impairment			
Hemadialysis Patients (0-5 ml / min)*	14.7	0.65	13.7
Severe (5-15 mL / min)	15.7	0.56	12.5
Moderate (16 -30 mL / min)	11.4	0.72	11.8
Mild (31 - 60 mL / min)	12.4	0.70	13.3
Patients With Liver Disease	8.8	1.1	13.6

* Creatinine clearance

Microbiology*:*

The bactericidal activity of Ceftriaxone results from inhibition of cell wall synthesis. Ceftriaxone has a high degree of stability in the presence of beta-lactamases, both penicillinases and cephalosporinases, of gram-negative and gram-positive bacteria.

In an in vitro study antagonistic effects have been observed with the combination of chloramphenicol & Ceftriaxone.

Aerobic gram-negative microorganisms:

Acinetobacter calcoaceticus, Enterobacter aerogenes, Enterobacter cloacae, Escherichia coli, Haemophilus influenzae (including ampicillin-resistant and beta-lactamase producing strains), *Haemophilus parainfluenzae, Klebsiella oxytoca , Klebsiella pneumonia, Moraxella catarrhalis* (including beta-lactamase producing strains), *Morganella morganii, Neisseria gonorrhoeae* (including penicillinase- and nonpenicillinase-producing strains), *Neisseria meningitidis Proteus mirabilis Proteus vulgaris, Serratia marcescens*

Ceftriaxone is also active against many strains of *Pseudomonas aeruginosa.*

NOTE: - Many strains of the above organisms that are resistant to multiple antibiotics, eg, penicillins, cephalosporins, and

aminoglycosides, are susceptible to Ceftriaxone.

Aerobic gram - positive microorganisms:

Staphylococcus aureus (including penicillinase-producing strains) *Staphylococcus epidermidis Streptococcus pneumoniae*

Streptococcus pyogenes Viridans group streptococci

NOTE: - Methicillin-resistant staphylococci are resistant to cephalosporins, including Ceftriaxone. Most strains of Group D streptococci and enterococci, eg, *Enterococcus (Streptococcus) faecalis,* are resistant.

Anaerobic microorganisms: - *Bacteroides fragilis, Clostridium* species, Pe*ptostreptococcus* species

NOTE: - Most strains of *Clostridium difficile* are resistant.

5.3 Pre-Clinical Safety Data

No additional data available

6. PHARMACEUTICAL PARTICULARS

6.1 List of Excipients

None

6.2 Incompatibilities

Vancomycin, amsacrine, aminoglycosides, and fluconazole are physically incompatible with Ceftriaxone and Sulbactam. When any of these drugs are to be administered concomitantly with Ceftriaxone by intermittent intravenous infusion, it is recommended that they be given sequentially, with thorough flushing of the intravenous lines (with one of the compatible fluids) between the administrations. Do not use diluents containing calcium, such as Ringer's solution or Hartmann's solution, to reconstitute Ceftriaxone vials or to further dilute a reconstituted vial for IV administration. Particulate formation can result.

Ceftriaxone and Sulbactam solutions should not be physically mixed with or piggybacked into solutions containing other antimicrobial drugs or into diluents solutions other than those listed above, due to possible incompatibility

6.3 Shelf Life

Dry Powder: 24 months from the date of manufacture

For shelf life of reconstituted product, see section 6.4

6.4 Special Precautions for Storage

Storage prior to reconstitution: Store below 30°C. Protect from light.

Storage after reconstitution: Store the reconstituted solution for not more than 24 hours at 2-8°C or 6 hours at 25°C. Do not freeze.

Keep all medicines out of the reach of children

6.5 Nature and Contents of Container

CEFTATIME-SB 375: 10 ml Clear glass vial USP type III with bromobutylated rubber stopper & Aluminium flip off seal caps, containing a white to off white crystalline powder. One such vial is packed in a unit carton along with a package insert.

CEFTATIME-SB 1.5: 20 ml Clear glass vial USP type III with bromobutylated rubber stopper & Aluminium flip off seal caps, containing a white to off white crystalline powder. One such vial is packed in a unit carton along with a package insert.

6.6 Special Precautions for Disposal

No special requirements.

7. DATE OF REVISION OF TEXT

April' 2019

Mankind

Manufactured by :
MANKIND PHARMA LTD.
Village - Kishanpura, P.O. Jamni wala,
Tehsil-Paonta Sahib, Distt. Sirmour-173025,
Himachal Pradesh (INDIA)
Regd. Office :
208, Okhla Industrial Estate,
Phase-3, New Delhi-110 020 (INDIA)

Marketed by:
Phillips Pharmaceuticals Nigeria Ltd.
122-132, Apapa-Oshodi Expressway,
Afprint Industrial Estate,
Iyana-Isolo, Lagos-Nigeria.

EMN6TPAANSNG117601