1.6 Product information:

1.6.1 Prescribing Information (Summary of Product Characteristics)

1. NAME OF THE FINISHED PHARMACEUTICAL PRODUCT

Cloxacillin Sodium Capsules USP 250 mg

1.1 Strength

250 mg

1.2 Pharmaceutical form

Solid oral Dosage hard gelatin capsule

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

2.1 Qualitative declaration

Each hard gelatin capsule contains:
Cloxacillin Sodium USP
Eq. to Cloxacillin 250mg
Excipients q.s.
Approved colour used in empty capsule shells.

2.2 Quantitative declaration

S. No.	Ingredients	Specification	Qty. Req. per batch in Kg	Overages	Actual Qty per Capsule (mg)	Function
1.	* Cloxacillin Sodium (Compacted)	USP	27.500	Nil	275.000	Active
2.	Sodium Starch Glycollate	USP	0.600	Nil	6.000	Disintegrant
3.	* Magnesium Stearate	USP	0.800	Nil	8.000	Lubricant
4.	Purified Talcum	USP	1.050	Nil	10.500	Lubricant
5.	Sodium Lauryl Sulphate	USP	0.500	Nil	5.000	Disintegrant
6.	EHG Capsules “2” Size	IH	101000	Nil	q.s.	Enclosure

2.3 Salts and hydrates
Cloxacillin Sodium USP equivalent to Cloxacillin 250 mg

2.4 Esters and pro-drugs
Not Applicable

2.5 Oral powders for solution or suspension

Not Applicable.

2.6 Parenterals excluding powders for reconstitution
Not Applicable

2.7 Powders for reconstitution prior to Parenteral administration
Not Applicable

2.8 Concentrates
Not Applicable

2.9 Transdermal patches
Not Applicable

2.10 Multidose solid or semi-solid products
Not Applicable

2.11 Biological medicinal products
Not Applicable

3. PHARMACEUTICAL FORM

Capsules for oral administration.

Black color cap & orange color Body size "2" hard gelatin capsule containing white to off white granular powder.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Cloxacillin sodium finds use in the treatment of infections caused by streptococci when associated with sensitive penicillinase-producing staphylococci; also in the treatment of all staphylococcal infections, whether penicillin G-sensitive or resistant.
In infections suspected of being caused by penicillinase-producing staphylococci, cloxacillin may be used for initial treatment after appropriate specimens have been taken for culture and before results of microbial susceptibility tests are known. If the results of identification and susceptibility tests indicate that the infecting organism is not a penicillinase-producing staphylococcus susceptible to cloxacillin, cloxacillin should be discontinued and treatment with an appropriate alternative agent instituted.
To reduce the development of drug-resistant bacteria and maintain the effectiveness of CLOXACILLIN and other antibacterial drugs, CLOXACILLIN should be used only to treat infections that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

4.2 Posology and method of administration

Posology

Adults: Mild to moderate infections: 250 to 500 mg every 6 hours.
It should be given l to 2 hours before meals as the presence of food in the stomach and small intestine reduces absorption. Maintain therapy for a minimum of 5 days.
Larger doses may be required for very severe infections.
A daily dose of 6 g should not be exceeded.

Children: Up to 5 kg (11 lb) body weight: 250 mg/day.
Over 5 kg (11 lb) up to approximately 40 kg (85 lb) body weight: 50 mg/kg/day. Total daily dosage must be divided into 4 doses, 1 dose given every 6 hours.
In infections associated with streptococcus pyogenes, treatment should be continued for at least 10 days to reduce the risk of glomerulonephritis or rheumatic fever.

4.3 Method of administration

Cloxacillin Sodium Capsule is for oral use.

Swallow with water without opening capsule.

Route of Administration: Oral

4.4 Contraindications

A history of allergic reactions to penicillin or cephalosporins.

4.5 Special warnings and precautions for use

WARNING: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients receiving penicillin therapy. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens. Careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins or other allergens. If an allergic or anaphylactic reaction occurs, discontinue treatment and administer the usual agents, e.g. antihistamines, pressor amines, corticosteroids.
Safety for use in pregnancy has not been established.

Susceptibility/Resistance
Development of Drug Resistant Bacteria
Prescribing CLOXACILLIN in the absence of a proven or strongly suspected bacterial infection is unlikely to provide benefit to the patient and risks the development of drug-resistant bacteria.

PRECAUTIONS: Candidiasis and other superinfections may occur, especially in debilitated and malnourished patients, or those with low resistance to infection due to corticosteroids, immunosuppressive agents or irradiation. If superinfection occurs, institute appropriate measures.
During long-term therapy, renal, hepatic and hematopoietic functions should be checked periodically.
Experience in premature and newborn infants is limited. Cautious administration of the drug to such patients and frequent evaluation of organ system function is recommended.
The passage of any penicillin from blood into brain is facilitated by inflamed meninges and during cardiopulmonary bypass. In the presence of such factors, particularly in renal failure when high serum concentrations can be attained, central nervous system adverse effects including myclonia, convulsive seizures and depressed consciousness can be expected. Although this complication has not been reported with cloxacillin, it should be anticipated.

4.6 Paediatric population

Not Applicable.

4.7 Interaction with other medicinal products and other forms of Interaction

Our healthcare professionals (e.g., doctor or pharmacist) may already be aware of any possible drug interactions and may be monitoring you for it. Do not start, stop or change the dosage of any medicine before checking with them first.

Before using this medication, tell your doctor or pharmacist of all prescription and nonprescription/herbal products you may use, especially of: fusidic acid, methotrexate, tetracyclines, warfarin, khat, guar gum.

Although most antibiotics are unlikely to affect hormonal birth control such as pills, patch, or ring, a few antibiotics (such as rifampin, rifabutin) can decrease their effectiveness. This could result in pregnancy. If you use hormonal birth control, ask your doctor or pharmacist for more details.

Cloxacillin may cause false positive results with certain diabetic urine testing products (cupric sulfate-type). This drug may also affect the results of certain lab tests. Make sure laboratory personnel and your doctors know you use this drug.

This document does not contain all possible interactions. Therefore, before using this product, tell your doctor or pharmacist of all the products you use. Keep a list of all your medications with you, and share the list with your doctor and pharmacist.

4.8 Additional information on special populations

Not Applicable.

4.9 Paediatric population

Not Applicable.

4.10 Pregnancy and lactation

Pregnancy:

Cloxacillin has been assigned to pregnancy category B. There are no controlled data in human pregnancies; however, there are no literature reports of congenital abnormalities

associated with it. Cloxacillin should only be given during pregnancy when need has been clearly established.

Breastfeeding:

There are no data on the excretion of cloxacillin into human milk. Other penicillins are excreted into human milk in small amounts. Adverse effects in the nursing infant are unlikely.

4.11 Effects on ability to drive and use machines

No studies on the effects on the ability to drive and use machines have been performed.

4.12 Undesirable effects

Gastrointestinal disturbances, such as nausea, vomiting, epigastric discomfort, flatulence and loose stools, have been noted in some patients. Rarely, mild leukopenia has occurred. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pre-therapeutic determinations were not made. Fever, anaphylaxis and allergic reactions (rash, urticaria) including wheezing and sneezing, have occasionally been encountered.

Eosoinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy. Thrombophlebitis has occurred occasionally I.V. therapy.

4.13 Overdose

When penicillin reaches a certain (as yet undetermined) concentration in the cerebrospinal fluid, neurotoxic symptoms may occur consisting of myoclonia, convulsive seizures, and depressed consciousness. Unless administration of the drug is stopped or its dosage reduced, the syndrome may progress to coma and death. Penicillin does not normally cross the blood-brain barrier to any substantial extent, but when massive doses are used (several grams a day) in the presence of inflamed meninges and/or impaired renal function, or in elderly patients, the drug may cause the above- mentioned toxic reactions. No antidote is required.

Treatment of overdose:

Stop administration temporarily - promote excretion (dialysis, etc.).

Toxic serum levels and the lethal serum level of cloxacillin in man are not known.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Cloxacillin is for use against staphylococci that produce beta-lactamase.; ATC code: J01CF02

Mechanism of action

Cloxacillin is a semisynthetic antibiotic in the same class as penicillin. Cloxacillin is for use against staphylococci that produce beta-lactamase.

By binding to specific penicillin-binding proteins (PBPs) located inside the bacterial cell wall, cloxacillin inhibits the third and last stage of bacterial cell wall synthesis. Cell lysis is then mediated by bacterial cell wall autolytic enzymes such as autolysins; it is possible that cloxacillin interferes with an autolysin inhibitor.

Pharmacokinetic/ pharmacodynamic relationship

Cloxacillin is bactericidal; it adheres to bacterial penicillin-binding proteins, thereby inhibiting bacterial cell wall synthesis. Cloxacillin resists the effects of penicillinases-enzymes that inactivate penicillin-and therefore is active against many strains of penicillinase-producing bacteria; this activity is most pronounced against penicillinase-producing staphylococci; some strains may remain resistant. Cloxacillin is also active against gram-positive aerobic and anaerobic bacilli but has no significant effect on gram-negative bacilli.

5.2 Pharmacokinetic properties

Absorption: Absorbed rapidly but incompletely (37% to 60%) from the GI tract; it's relatively acid stable. Food may decrease both rate and extent of absorption.

Distribution: Distributed widely. CSF penetration is poor but enhanced in meningeal inflammation. Cloxacillin crosses the placental barrier and is 90% to 96% protein-bound.

Metabolism: Only partially metabolized.

Excretion: Excreted in urine by renal tubular secretion and glomerular filtration; also appears in breast milk. Elimination half-life in adults is 1/2 to 1 hour, extended to 2 1/2 hours in patients with renal impairment.

5.3 Preclinical safety data

Not Applicable.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sodium Starch Glycollate	USP
Magnesium Stearate	USP
Purified Talcum	USP
Sodium Lauryl Sulphate	USP
E.H.G Capsule Size "2"	IH

6.2 Incompatibilities

Not Applicable

6.3 Shelf life

36 Months

6.4 Special precautions for storage

Store protected from light at a temperature not exceeding 30°C.

6.5 Nature and contents of container

10×10 Alu/PVC Blister.

6.6 Special precautions for disposal and other handling

No special requirements

7 Marketing Authorisation Holder And Manufacturing Site Addresses

Scott-Edil Advance Research Laboratories & Education Limited.
Hill Top Ind. Area, Bhatoli Kalan,
Baddi-173205, Himachal Pradesh, INDIA

MANUFACTURING SITE ADDRESS
Scott-Edil Advance Research Laboratories & Education Limited.
Hill Top Ind. Area, Bhatoli Kalan,
Baddi-173205, Himachal Pradesh, INDIA

8 MARKETING AUTHORISATION NUMBER
Not Applicable

9 DATE OF FIRST REGISTRATION/RENEWAL OF THE REGISTRATION
Not Applicable.

10 DATE OF REVISION OF THE TEXT
Not Applicable

11 DOSIMETRY
Not Applicable