Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Clindamycin 150 mg/ml Solution for injection/infusion

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml of solution contains 150 mg clindamycin (as phosphate).

Each ampoule of 2 ml contains 300 mg clindamycin (as phosphate).
Each ampoule of 4 ml contains 600 mg clindamycin (as phosphate).
Each ampoule of 6 ml contains 900 mg clindamycin (as phosphate).

Excipient with known effect
Each ml of solution contains up to 7.72 mg of sodium.

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Solution for injection/infusion [injection/infusion]

Clear and colourless to almost colourless solution.

pH: 5.50 – 7.00

Osmolality: 760-900 mOsm/kg

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Clindamycin is indicated for the treatment of the following severe infections caused by clindamycin susceptible microorganisms in adults, adolescents and children ≥1 months (see sections 4.2 and 5.1):

- Bone and joint infections
- Chronic sinusitis
- Infections of the lower respiratory tract

- Intra-abdominal infections
- Pelvic and female genital infections.
- Skin and soft tissue infections

- Dental Infection
- Treatment of bacteraemia that occurs in association with, or is suspected to be associated with any of the infections listed above

and

- Treatment of opportunistic infections from *Toxoplasma gondii* and *Pneumocystis jirovecii* in adult immunocompromised patients.

In case of aerobic infections clindamycin constitutes an alternative treatment in case other antibacterial agents are inactive or contraindicated (e.g. in case of allergy to penicillins). In case of anaerobic infections a treatment with clindamycin as first choice

agent can be envisaged. In case of polymicrobial infection, consideration should be given to use in combination with an agent with adequate activity against Gram-negative bacteria.

Consideration should be given to official guidance on the appropriate use of antibacterial agents.

4.2 Posology and method of administration

Posology

Adults and adolescents older than 12 years

- for the treatment of severe infections: 1800 to 2700 mg clindamycin daily in two to four equal doses, generally in combination with an antibiotic with good activity against aerobic Gram-negative bacteria.

- or for the treatment of less complicated infections: 1200 to 1800 mg clindamycin daily administered in three or four equal doses.

Normally the maximum daily dose for adults and adolescents older than 12 years is 2700 mg clindamycin in two to four equal doses. In life-threatening infections doses up to 4800 mg/day have been given.

Paediatric Population
Children (over 1 month of age up to 12 years):
Serious infections: 15-25 mg/kg/day in three or four equal doses.

More severe infections: 25-40 mg/kg/day in three or four equal doses. In severe infections, it is recommended that children be given no less than 300 mg/day regardless of body weight.

Clindamycin should be dosed based on total body weight regardless of obesity.

The maximum daily dose should not exceed that of adults.

Elderly patients:
The half-life, volume of distribution and clearance, and extent of absorption after administration of clindamycin phosphate are not altered by increased age. Analysis of data from clinical studies has not revealed any age-related increase in toxicity. Therefore, no dose adjustment is required in elderly patients with normal hepatic function and normal (depending on age) renal function. See section 4.4 for other factors which should be taken into consideration.

Patients with hepatic impairment
In patients with liver disease of moderate to severe degree, elimination half-life of clindamycin is prolonged. A reduction in dosage is generally not necessary if clindamycin is administered every 8 hours. However, the plasma concentration of clindamycin should be monitored in patients with severe hepatic insufficiency. Depending on the results, this measure can make a reduction in dosage or an increase in the dose intervals necessary.

Patients with renal impairment:
In the presence of kidney disease, elimination half-life is prolonged; however, a dosage reduction is not necessary in the event of mild to moderate impairment of renal function. Nevertheless, the plasma concentration should be monitored in patients with severe renal insufficiency or anuria. Depending on the results, this measure can make a reduction in dosage or an increase in the dose interval of 8 or even 12 hours necessary.

Dosage in the event of haemodialysis
Clindamycin cannot be removed by haemodialysis. Therefore, no additional dose is necessary before or after haemodialysis.

Duration of treatment
In case of proven or even suspected infections with ß-haemolytic streptococci the treatment with clindamycin should be continued for at least 10 days to prevent the development of rheumatic fever or glomerulonephritis.

Method of administration
Clindamycin is administered by intramuscular injection or intravenous infusion.
Clindamycin must be diluted prior to intravenous administration and should be infused over at least 10-60 minutes. The concentration should not exceed 18 mg clindamycin per ml solution.
For intramuscular administration Clindamycin should be used undiluted.

Single intramuscular (IM) injections of greater than 600 mg are not recommended nor is administration of more than 1.2 g in a single one-hour infusion.

Alternatively, the medicinal product may be administered in the form of a single rapid infusion of the first dose followed by continuous intravenous (IV) infusion.

For instructions on dilution of the medicinal product before administration, see section 6.6.

4.3 Contraindications

Hypersensitivity to the active substance or lincomycin or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Hypersensitivity
Severe hypersensitivity reactions, including severe skin reactions such as drug reaction with eosinophilia and systemic symptoms (DRESS), Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and acute generalized exanthematous pustulosis (AGEP) have been reported in patients receiving clindamycin therapy. If a hypersensitivity or severe skin reaction occurs, clindamycin should be discontinued and appropriate therapy should be initiated (see sections 4.3 and 4.8).

Allergy
Severe allergic reactions can occur even after the first application. In this case, treatment with clindamycin must be discontinued immediately and the appropriate standard emergency measures must be started.

Under certain circumstances, clindamycin therapy may be an alternative form of treatment in patients with a penicillin allergy (penicillin hypersensitivity). There have been no reports of a cross-allergy between clindamycin and penicillin and, based on the structural differences between the substances, this is not to be expected. However, in individual cases, information does exist on anaphylaxis (hypersensitivity) towards clindamycin in persons with an already existing penicillin allergy. This should be taken into consideration in a course of clindamycin treatment in patients with a penicillin allergy.

Colitis
Clindamycin should only be used in the treatment of serious infections. In considering the use of clindamycin, the practitioner should bear in mind the type of infection and the potential hazard of the diarrhoea which may develop, since cases of colitis have been reported during, or even two or three weeks following, the administration of clindamycin. The disease is likely to follow a more severe course in older patients or patients who are debilitated.

The development of *Clostridioides difficile* associated diarrhoea (CDAD) has been reported with use of nearly all antibacterial agents, including clindamycin. It ranges from mild diarrhoea to fatal colitis.
Treatment with antibacterial agents alters the normal flora of the colon leading to overgrowth of *C. difficile*. *C. difficile* produces toxins A and B which contribute to the development of CDAD and is a primary cause of 'antibiotic-associated colitis'.

Hypervirulent strains of *C. difficile* are associated with increased morbidity and mortality since such infections may be resistant to antibiotic therapy and may require colectomy.

It is important to consider the diagnosis of CDAD in patients who present with diarrhoea subsequent to the administration of antibacterial agents.
In this case, a careful anamnesis has to be performed since a CDAD can occur up to two months after antibiotic therapy.
If antibiotic-associated diarrhoea or antibiotic-associated colitis is suspected or confirmed, ongoing treatment with antibacterial agents, including clindamycin, should be discontinued and adequate therapeutic measures should be initiated immediately.Medicinal products inhibiting peristalsis are contraindicated in this situation.

Precautions

Caution should be exercised in patients with

- impaired hepatic and/or renal function (see section 4.2),
- disturbances in neuromuscular transmission (myasthenia gravis, Parkinson's disease, etc.) as well as
- a history of gastrointestinal disorders (e.g. earlier inflammations of the colon).
- atopic diseases.

Bolous injection
Rapid intravenous injection may have a serious effect on the heart (see section 4.8) and must be avoided.

Laboratory testing during therapy
In infants under the age of one year and in long-term therapy (treatment for more than 10 days), the haemogram as well as hepatic and renal function should be monitored at regular intervals.

Acute kidney injury
Acute kidney injury, including acute renal failure, has been reported infrequently. In patients suffering from pre-existing renal dysfunction or taking concomitant nephrotoxic drugs, monitoring of renal function should be considered (see section 4.8).

Non-susceptible infections
Long-term and repeated application of clindamycin can lead to a superinfection and/or colonisation with resistant pathogens or yeasts on the skin and mucous membranes.
Clindamycin should not be used in case of acute infections of the respiratory tract, if these are caused by viruses.
Clindamycin is not suitable for the treatment of meningitis, as the concentration of antibiotic obtained in the cerebrospinal fluid is insufficient.

Paediatric population
Safety and appropriate dosage in infants less than one month of age have not been established.

Excipients
This medicinal product contains up to 7.72 mg of sodium per ml, equivalent to 0.39% of the recommended maximum daily intake of 2 g sodium for an adult.

4.5 Interaction with other medicinal products and other forms of interaction

Vitamin K antagonists
Increased coagulation tests (PT/INR) and/or bleeding, have been reported in patients treated with clindamycin in combination with a vitamin K antagonist (e.g. warfarin, acenocoumarol and fluindione). Coagulation tests, therefore, should be frequently monitored in patients treated with vitamin K antagonists.

Erythromycin
Wherever possible, clindamycin should not be combined with erythromycin as an antagonistic effect of antibacterial action has been observed *in vitro*.

Lincomycin
There is cross-resistance of pathogens towards clindamycin and lincomycin.

Neuromuscular blocking agents
Due to its neuromuscular-blocking properties, clindamycin can potentiate the effect of muscle relaxants. As a result of this, unexpected, life-threatening incidents may occur during surgery.

Clindamycin is metabolized predominantly by CYP3A4, and to a lesser extent by CYP3A5, to the major metabolite clindamycin sulfoxide and minor metabolite N-desmethylclindamycin. Therefore, inhibitors of CYP3A4 and CYP3A5 may increase plasma concentrations of clindamycin. Some examples of strong CYP3A4 inhibitors are itraconazole, voriconazole, clarithromycin, telitromycin, ritonavir and cobicistat. Caution is recommended if clindamycin is used together with strong CYP3A4 inhibitors. Inducers of these enzymes may increase clearance of clindamycin, resulting in decreased plasma concentrations. In a prospective study with orally administered clindamycin, trough concentrations of clindamycin were decreased by 80% when given concomitantly with rifampicin, a strong inducer of CYP3A4. Patients should be observed for reduced treatment efficacy if

clindamycin is used together with strong CYP3A4 inducers such as rifampicin, St John's wort (*Hypericum perforatum*), carbamazepine, phenytoin or phenobarbital.

In vitro studies indicate that clindamycin does not inhibit CYP1A2, CYP2C9, CYP2C19, CYP2E1 or CYP2D6. Therefore, clinically important interactions between clindamycin and co-administered medicinal products metabolized by these CYP enzymes are unlikely. Based on in vitro-data orally administered clindamycin may inhibit intestinal CYP3A4, but clinically relevant effects of parenterally administered clindamycin on concomitantly administered medicinal products metabolized by CYP3A4 are unlikely.

4.6 Fertility, pregnancy and lactation

Pregnancy

A large study on pregnant women, in which approx. 650 neonates exposed in the first trimester of pregnancy were examined, showed no increase in malformation rates. However, there are inadequate data regarding the safety of clindamycin in pregnancy.

In clinical trials with pregnant women, the systemic administration of clindamycin during the second and third trimesters has not been associated with an increased frequency of congenital abnormalities. There are no adequate and well-controlled studies in pregnant women during the first trimester of pregnancy.

Clindamycin crosses the placenta. It is assumed that a concentration with therapeutic effect can be reached in the fetus.

Animal studies do not indicate direct or indirect harmful effects on pregnancy, embryonal / fetal development, childbirth or postnatal development (see section 5.3).

Clindamycin should be only be administered when no other treatment options are available.
Breastfeeding
Clindamycin is excreted in human milk, there is a risk of effects in breastfed newborns/infants of treated women. These effects are a risk of sensitisation, skin rash, diarrhoea, blood in stool and yeast colonisation. Clindamycin should not be used during breast-feeding.

Fertility
Animal studies revealed no effects on the fertility. There are no data about the influence of clindamycin on the fertility in humans.

4.7 Effects on ability to drive and use machines

Clindamycin has mild to moderate influence on the ability to drive and use machines. Undesirable effects like dizziness, sleepiness and headaches can constrict the ability to drive and use machines.

In isolated cases undesirable effects (e.g. anaphylactic shock) have been observed (see section 4.8.) which render patients incapable of participating actively in road traffic or operating machines and working without suitable precautions owing to unsteadiness.

4.8 Undesirable effects

a) Tabular summary of undesirable effects

The table below lists the adverse reactions identified through clinical trial experience and post-marketing surveillance by system organ class and frequency.

The frequency grouping is defined using the following convention:
Very common (≥ 1/10)
Common (≥ 1/100 to < 1/10)
Uncommon (≥ 1/1,000 to < 1/100)
Rare (≥ 1/10,000 to < 1/1,000)
Very rare (< 1/10,000)
Not known (cannot be estimated form the available data)

Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness.

System Organ Class	Very common	Common	Uncommon	Rare	Very Rare	Not known
Infections and Infestations		pseudomembranous colitis*#				*Clostridioides difficile* colitis*, vaginal infection*
Blood and lymphatic system disorders		Agranulocytosis*, neutropenia*, thrombocyte-penia*, leucopenia*, eosinophilia				
Immune System disorders				drug fever	anaphylactic reaction *,#	anaphylactic shock*, anaphylactoid reaction*, hypersensitivity *
Nervous system disorders			dysgeusia, neuromuscular blocking effect			headache, sleepiness, dizziness
Cardiac disorders			cardiorespiratory arrest§			
Vascular Disorders		thrombophlebitis	hypotension§			
Gastrointestinal disorders	diarrhoea, abdominal pain, vomiting, nausea					
Hepatobiliary disorders					transient hepatitis with cholestatic jaundice	jaundice*
Skin and subcutaneous tissue disorders		maculopapular exanthema, morbilliform exanthema*, urticaria		toxic epidermal necrolysis (TEN)*, Stevens Johnson syndrome (SJS)*, Lyell syndrome, angioedema*, exfoliative dermatitis* bullous dermatitis*, erythema multiforme*, pruritus, vaginitis	rash and formation of blisters (hypersensitivity reaction)	drug reaction with eosinophilia and systemic symptom (DRESS)*, acute generalised exanthematous pustulosis (AGEP)*
Musculoskeletal and connective tissue disorders					Polyarthritis	
Renal and urinary disorders						Acute kidney injury#
General			pain, injection			injection site

disorders and administrations site conditions			site abscess			irritation*
Investigations		Liver function test abnormal				

* Adverse reactions identified from post-marketing experience
# see section 4.4
§ Rare instances have been reported following too rapid intravenous administration (see section 4.2).

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the HPRA Pharmacovigilance Website: www.hpra.ie.

4.9 Overdose

No overdose symptoms have yet been observed. Haemodialysis and peritoneal dialysis are ineffective. There is no known specific antidote. Clindamycin is administered via i.m. or i.v. route therefore gastric lavage is not useful.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Antibacterials for systemic use; Lincosamides, ATC code: J01FF01

Mechanism of action
Clindamycin binds to the 50S subunit of the bacterial ribosome and inhibits protein synthesis. Clindamycin has a predominately bacteriostatic action.

Pharmacodynamic effects
The efficacy is basically dependent on the time period, in which the agent level is above the minimum inhibitory concentration (MIC) of the pathogen.

Mechanism(s) of resistance
Resistance to clindamycin can be due to the following mechanisms:
Resistance to staphylococci and streptococci is often based on methyl groups increasingly binding to the 23S rRNA (so-called constitutive MLSB-resistance), whereby the binding affinity of clindamycin to the ribosome is highly reduced.

The majority of methicillin-resistant *S. aureus* (MRSA) shows the constitutive MLSB type of resistance and is therefore resistant to clindamycin. Infections caused by macrolide-resistant staphylococci should not be treated with clindamycin, also when in-vitro susceptibility was proven, because therapy may lead to selection of mutants with constitutive MLSB resistance. Strains with constitutive MLSB resistance show complete cross-resistance of clindamycin with lincomycin, macrolides (e.g. azithromycin, clarithromycin, erythromycin, roxithromycin, spiramycin) as well as streptogramin B.

Breakpoints
Common dilution series are used for clindamycin testing. Following minimum inhibitory concentrations for susceptible and resistant germs were defined:
EUCAST (Version 13.0, valid from 2023-01-01)

Clinical Breakpoints

Pathogen	Susceptible	Resistant
Staphylococcus spp.[1]	≤ 0.25 mg/l	> 0.25 mg/l
Streptococcus (groups A, B, C, G) [1, 2]	≤ 0.5 mg/l	> 0.5 mg/l
Streptococcus pneumoniae[3]	≤ 0.5 mg/l	> 0.5 mg/l
Viridans group streptococci[4]	≤ 0.5 mg/l	> 0.5 mg/l
Bacteroides spp.	(≤ 4 mg/l)	(> 4 mg/l)

Prevotella spp.	≤ 0.25 mg/l	> 0.25 mg/l
Fusobacterium necrophorum	≤ 0.25 mg/l	> 0.25 mg/l
Clostridium perfringens	≤ 0.25 mg/l	> 0.25 mg/l
Cutibacterium acnes	≤ 0.25 mg/l	> 0.25 mg/l
Corynebacterium spp.[5]	≤ 0.5 mg/l	> 0.5 mg/l

[1] Inducible clindamycin resistance can be detected by antagonism of clindamycin activity by a macrolide agent. If not detected, then report as susceptible. If detected, then report as resistant and consider adding this comment to the report: "Clindamycin may still be used for short-term therapy of less serious skin and soft tissue infections as constitutive resistance is unlikely to develop during such therapy".
[2] The clinical importance of inducible clindamycin resistance in combination treatment of severe S. pyogenes infections is not known.
[3] Inducible clindamycin resistance can be detected by antagonism of clindamycin activity by a macrolide agent. If not detected, then report as susceptible. If detected, then report as resistant.
[4] Inducible clindamycin resistance can be detected by antagonism of clindamycin activity by a macrolide agent. If not detected, then report as tested according to the clinical breakpoints. If detected, then report as resistant.
[5] Inducible clindamycin resistance may occur in Corynebacteria. This can be detected by antagonism of clindamycin activity by a macrolide agent. The clinical significance is unknown. There is currently no recommendation for testing.

Prevalence of acquired resistance

The prevalence of acquired resistance may vary geographically and with time for selected species and local information on resistance is desirable, particularly when treating severe infections. As necessary, expert advice should be sought when the local prevalence of resistance is such that the utility of the agent in at least some types of infections is questionable. Particularly in severe infections or therapy failure microbiological diagnosis with verification of the pathogen and its susceptibility to clindamycin is recommended.

Commonly susceptible species
Aerobic Gram-positive microorganisms
Staphylococcus aureus (Methicillin-sensitive)
Streptococcus pneumoniae
Streptococcus pyogenes
*Streptococci of the „viridans"-group°^*
Anaerobic microorganisms
Actinomyces israelii°
Bacteroides spp.° (excl. B. fragilis)
Clostridium perfringens °
Fusobacterium spp.°
Peptoniphilus spp. °
Peptostreptococcus spp. °
Prevotella spp.
Propionibacterium spp. °
Veillonella spp.°
Other microorganisms
Chlamydia trachomatis°
Chlamydia pneumoniae°
Gardnerella vaginalis°
Mycoplasma hominis°
Pneumocystis jirovecii

Toxoplasma gondii

Species for which acquired resistance may be a problem
Aerobic Gram-positive microorganisms
Staphylococcus aureus
Staphylococcus aureus (Methicillin-resistant)+
Staphylococcus epidermidis+
Staphylococcus haemolyticus
Staphylococcus hominis
Streptococcus agalactiae
Aerobic Gram-negative microorganisms
Moraxella catarrhalis$
Anaerobic microorganisms
Bacteroides fragilis

Inherently resistant organisms
Aerobic Gram-positive microorganisms
Enterococcus spp.
Listeria monocytogenes
Aerobic Gram-negative microorganisms
Escherichia coli
Haemophilus influenzae
Klebsiella spp.
Pseudomonas aeruginosa
Anaerobic microorganisms
Clostridioides difficile
Other microorganisms
Mycoplasma pneumoniae
Ureaplasma urealyticum

° No updated data were available at release of tables. Primary literature, scientific standard literature and therapeutic recommendations assume susceptibility.
$ Inherent susceptibility of most of the isolates shows intermediate resistance.
+ At least on region shows resistance rates higher than 50%.
^ Collective name for a heterogeneous group of streptococci species. Resistance rate may vary according to the streptococci species present.

5.2 Pharmacokinetic properties

Absorption
A difference only has to be made between the clindamycin derivatives used up until the time of absorption and splitting of the esters. Afterwards clindamycin exists in the body as a free base (active form). The esters should be considered being prodrugs. Clindamycin phosphate is a water-soluble ester for parenteral application. After intramuscular injection of 300 mg, peak serum levels after 3 hours are approx. 6 microgram/ml, following intravenous application of 300 mg the mean serum concentrations after one hour are approx. 4 to 6 microgram/ml.

Distribution
The degree of binding of clindamycin to plasma proteins is concentration-dependent and lies within the therapeutic range of between 40 and 94 %.

Clindamycin readily distributes into the tissues, passes through the placental barrier and distributes into breast milk. Even if the meninges are inflamed, diffusion into the subarachnoid space is inadequate. High concentrations are achieved in bone tissue, synovial fluid, peritoneal fluid, pleural fluid, expectorations and pus. The following concurrent serum concentrations of the active substance are reported: inbone tissue 40 % (20 – 75 %), in synovial fluid 50 %, in peritoneal fluid 50 %, in pleural fluid 50 – 90 %, in expectorations 30 – 75 % and in pus 30 %.

Metabolism

Clindamycin is metabolised primarily in the liver.
In vitro studies in human liver and intestinal microsomes indicated that clindamycin is predominantly oxidized by CYP3A4, with minor contribution from CYP3A5, to form clindamycin sulfoxide and a minor metabolite, N-desmethylclindamycin.
The serum half-life of clindamycin is approx. 3 hours in adults and approx. 2 hours in children. In the presence of renal insufficiency and moderate to severe hepatic insufficiency, the half-life is prolonged.
Some metabolites are microbiologically active (N-demethyl and sulphoxide). Medicinal products that act as enzyme inducers in the liver shorten the mean retention time of clindamycin in the body.

Elimination
Clindamycin is eliminated via the faeces at 2/3 and via the urine at 1/3 of the dose. Less than 10% of the dose is excreted unchanged in the urine.
Clindamycin cannot be dialysed.

Obese paediatric patients aged 2 to under 18 years and obese adults aged 18 to 20 years:
Analysis of pharmacokinetic data in obese paediatric patients aged 2 to under 18 years and obese adults aged 18 to 20 years showed that clindamycin clearance and volume of distribution normalised to total body weight were comparable to normal weight subjects.

5.3 Preclinical safety data

Symptoms of intoxication are decreased activity of the animals and convulsions.
After repeated doses (i.m.) of clindamycin to dogs an increase of the SGOT and SGPT was reported and also a slight increase of the liver-weight without morphologic changes were documented. Long-term administration of clindamycin to dogs induced damages to the gastric mucosa and to the gall bladder.

Local reactions at the injection site (inflammations, haemorrhagias and tissue damage) were observed following intramuscular and subcutaneous application, however, the concentration of the solution applied far exceeded the maximum therapeutic concentration.

Carcinogenicity
Long-term animal studies to evaluate the carcinogenic potential of clindamycin have not been performed.

Mutagenesis
Performed genotoxic tests include a micronucleus test in rats and an Ames Salmonella Reversion test. Results from both tests were negative.

Reproductive toxicity
In embryo studies foetal development in rats following oral administration and embryo foetal development studies in rats and rabbits following subcutaneous administration with clindamycin, developmental toxicity was observed only at doses which resulted in maternal toxicity.

Reproductive toxicity studies in rats and rabbits administered clindamycin orally (rats only) and subcutaneously showed no evidence of fertility or foetal injury, except for doses that resulted in maternal toxicity.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Disodium edetate
Sodium hydroxide 5N (for pH adjustment)
Hydrochloric Acid 5N (for pH adjustment)
Water for injections

6.2 Incompatibilities

The following active substances are physically incompatible with clindamycin:
ampicillin, aminophylline, barbiturates, calcium gluconate, ceftriaxone sodium, ciprofloxacin, diphenylhydantoin, idarubicin hydrochloride, magnesium sulphate, phenytoin sodium, and ranitidine hydrochloride. Solutions of clindamycin salts have a low pH and incompatibility may reasonably be expected with alkaline preparations or with medicinal products unstable at low pH.

This medicinal product must not be mixed with other medicinal products except those mentioned in section 6.6.

6.3 Shelf life

12 months

After dilution:
Chemical and physical in-use stability has been demonstrated for 24 hours at 25 °C and 2-8 °C with sodium chloride 9 mg/ml (0.9 %) and glucose 50 mg/ml (5 %) solutions, at a concentration of clindamycin 6 and 18 mg/ml in polypropylene infusion bags.

From a microbiological point of view, unless the method of dilution precludes the risk of microbial contamination, the product should be used immediately. If not used immediately, in-use storage times and conditions are the responsibility of the user.

6.4 Special precautions for storage

Store below 25 °C.

For storage conditions after dilution of the medicinal product, see section 6.3.

6.5 Nature and contents of container

Type I, clear glass ampoules containing 2 ml, 4 ml or 6 ml of solution, packed in carton boxes of 1, 5, 10 or 25 ampoules.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Clindamycin must be diluted prior to intravenous administration (not exceeding 18 mg clindamycin per ml) and should be infused over at least 10 - 60 minutes (not exceeding 30 mg/min). It can never be injected as an intravenous bolus.

Dose of clindamycin	Quantity of Diluent	Minimum infusion-time
300 mg	50 ml	10 minutes
600 mg	50 ml	20 minutes
900 mg	50 -100 ml	30 minutes
1200 mg	100 ml	60 minutes

Clindamycin may be diluted with sodium chloride 9 mg/ml (0.9 %) solution or
glucose 50 mg/ml (5 %) solution.

Intramuscular administration is indicated when intravenous infusion is not possible for any reasons.

For single use only.

The medicinal product is to be visually inspected prior to use and also after dilution.
Only clear solutions free of visible particles should be used.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7 MARKETING AUTHORISATION HOLDER

Noridem Enterprises Ltd,
Evagorou & Makariou,
Mitsi Building 3, Office 115,
1065 Nicosia, Cyprus

8 MARKETING AUTHORISATION NUMBER

PA1122/033/001

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 12th May 2023

10 DATE OF REVISION OF THE TEXT