SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Methenamine hippurate Pfleger 1 g tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One tablet contains 1 gram methenamine hippurate.
For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Tablet.
White to off-white, capsule shaped tablets with dimension 19 mm x 8 mm and with breaklines on both sides. The tablets can be divided into equal doses.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

<Invented name> is indicated in the prophylaxis of uncomplicated lower urinary tract infections:

1. As long-term prophylactic therapy after initial treatment with appropriate chemotherapeutic agent of recurrent urinary infections.
2. As long-term therapy in the prevention of recurrent cystitis.
3. To provide short-term prophylaxis in patients with indwelling catheters, urine collector etc. and to reduce the incidence of catheter blockage.
4. To provide prophylaxis against the introduction of infection into urinary tract during surgical procedures.
5. Asymptomatic bacteriuria in individuals undergoing endourological procedures.

4.2 Posology and method of administration

Posology

Adults: 1 g 2 times a day.
In patients with catheters the dosage may be increased to 1 g three times daily.

In cases of alkaline urine pH, supply of acidifying agent could be needed.

Paediatric population
Children over 12 years: 1 g twice daily.
Children 6-12 years: 0,5 g twice daily.

The safety and efficacy of methenamine in children aged <6 years has not been established. No data are available.

Method of administration

Oral use. The tablets may be halved or crushed and taken with water if the patient is unable to swallow whole tablets.

4.3 Contraindications

<Invented name> is contraindicated in patients with:

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
- Intolerance or allergic reactions to formalin.
- Renal insufficiency, severe dehydration and gout.
- Hepatic impairment.
- Metabolic acidosis.
- Infection of the kidney.

<Invented name> should not be given concurrently with sulphonamides because of the possibility of crystalluria.

Alkaline agents reduce the effect of methenamine and should be avoided, antacids might cause an increase of urine pH and hence decrease the effect of <Invented name>.

4.4 Special warnings and precautions for use

Sodium
This medicine contains less than 1 mmol sodium (23 mg) per tablet, that is to say essentially 'sodium-free'.

4.5 Interaction with other medicinal products and other forms of interaction

Alkaline agents reduce the effect of methenamine and should be avoided, antacids might cause an increase of urine pH and hence decrease the effect of <Invented name>.
Concurrent use with sulphonamides increases the risk of crystalluria.
Depending on analytical procedure, methenamine might affect the determination of steroid, catecholamine and 5-hydroxyindoleacetic acid leading to incorrect results.

4.6 Fertility, pregnancy and lactation

Pregnancy
A moderate amount of data on pregnant women (between 300-1000 pregnancies) has not shown signs of malformations or fetal/neonatal toxicity. Animal studies are insufficient with respect to reproductive toxicity (see section 5.3). As a precautionary measure, it is preferable to avoid the use of <invented name> during pregnancy.

Breastfeeding
Methenamine Hippurate is excreted in human milk, but at therapeutic doses of <Invented name> no effects on the breastfed newborns/infants are anticipated. <Invented name> can be used during breast-feeding. However, in order to reduce exposure to the breastfed child, breast-feeding should be avoided for 4 h after drug administration.

Fertility
There are no human studies regarding fertility and Methenamine Hippurate.
Animal studies do not indicate direct or indirect harmful effects with respect to reproductive toxicity.

4.7 Effects on ability to drive and use machines

<Invented name> has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Adverse events frequencies are defined as:
Very common (≥1/l0)
Common (≥1/100 to <1/10)
Uncommon (≥1/1000 to <1/100)
Rare (≥ 1/10 000 to <1/1000)
Very rare (<1/10 000)
Not known (cannot be estimated from the available data).

System Organ Class	**Frequency**		
	Common	*Rare*	*Not known*
Gastrointestinal disorders	Nausea, vomiting		Diarrhoea, abdominal pain
Skin and subcutaneous tissue disorders	Rash		Pruritus
Renal and urinary disorders	Bladder irritation	Haematuria	

Occasionally superinfection with yeast may occur. At high dosage, chemical cystitis leading to dysuria may occur.

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 national reporting system listed in Appendix V.

4.9 Overdose

Toxicity: 8 g to a 2½-year old child resulted in moderate intoxication.
Symptoms: Nausea, vomiting, vertigo, tinnitus and metabolic acidosis may occur. Irritating effect on the urinary tract with albuminuria and haematuria.
Treatment: The treatment is symptomatic and supportive, the use of an anti-emetic and drinking copious quantities of water. Bladder symptoms can be treated by the consumption of copious quantities of water and 2-3 teaspoonfuls of bicarbonate of soda.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Antibacterials for systemic use, other antibacterials, ATC code: J01XX05

Mechanism of action
<Invented name> contains Methenamine Hippurate, a salt of methenamine and hippuric acid, which is absorbed and excreted rapidly. In acidic environment, methenamine is hydrolyzed to formaldehyde, which, together with hippuric acid mediates the antibacterial effect in urine.

Bacteriological studies have shown that the urine has antibacterial effect already 30 minutes after intake of the drug.

Pharmacodynamic effects
<Invented name> is active against microorganisms, which usually causes urinary tract infection, e.g. *Escherichia coli* and *Aerobacter aerogenes*. The substance has decreased effect on urea-degrading bacteria, e.g. *Pseudomonas* and some strains of *Proteus*. Urea-degrading bacteria hydrolyze the urea to ammonium hydroxide which is basic and increase urinary pH. This results in reduced hydrolysis of methenamine to formaldehyde.

5.2 Pharmacokinetic properties

Absorption
<Invented name> is readily absorbed from the gastro-intestinal tract and excreted via the kidney.

Distribution
Plasma concentrations of Methenamine Hippurate reach maximum 1-2 hours after a single dose and decline with a half-life of about 4 hours. The antibacterial effect is noticed 30 minutes after administration of the drug as mentioned in section 5.1. Methenamine recovered in the urine corresponds to about 80% of the dose given.

5.3 Preclinical safety data

Preclinical studies reveal no special hazard for humans, although reproductive toxicity studies are not considered conclusive.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Silica, colloidal anhydrous
Povidone K29/32
Magnesium stearate
Croscarmellose sodium

6.2 Incompatibilities

Not applicable

6.3 Shelf life

Bottle: 3 years
Blister: 2 years

6.4 Special precautions for storage

Store in the original package in order to protect from moisture.

6.5 Nature and contents of container

Bottle
Coloured glass bottle with opaque high density polyethylene screw cap containing 20, 60 or 100 tablets.

Blister
Alu-Alu blister in cardboard outer box containing 20, 60, 100, 180 and 200 tablets.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

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

7. MARKETING AUTHORISATION HOLDER

<To be completed nationally>

8. MARKETING AUTHORISATION NUMBER(S)

<To be completed nationally>

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: DD-MM-YYYY

10. DATE OF REVISION OF THE TEXT

2025-01-16