SUMMARY OF PRODUCT CHARACTERISTICS

1.NAME OF THE MEDICINAL PRODUCT

Keto Plus Shampoo (Ketoconazole & Zinc Pyrithione Shampoo)

2.QUALITATIVE AND QUANTITATIVE COMPOSITION

Ketoconazole BP ..... %
w/v
Zinc Pyrithione (ZPTO) ..... %
w/v

3.PHARMACEUTICAL FORM

Shampoo

4.CLINICAL PARTICULARS

4.1 Therapeutic indications

Keto Plus Shampoo (Ketoconazole & Zinc Pyrithione Shampoo) is indicated for the prevention and treatment of infections in which the yeast Malassezia (previously called Pityrosporum) is likely to be involved, such as dandruff and seborrhoeic dermatitis. Treatment of tinea (pityriasis) versicolor.

4.2 Posology and Method of Administration

Keto Plus Shampoo (Ketoconazole & Zinc Pyrithione Shampoo) is for use in adolescents and adults.

Wash affected areas and leave for 3-5 minutes before rinsing.

Posology

Treatment

Dandruff and seborrhoeic dermatitis: Wash hair twice weekly for

2-4 weeks. Tinea versicolor: Once daily for 1-5 days.

Prophylaxis:

Dandruff and seborrhoeic dermatitis: Use once every 1-2 weeks.

Method of administration

For topical administration.

Direction for Use

Shake well before use.

Moisten hair and scalp thoroughly with water. Apply sufficient Shampoo to produce enough lather to wash scalp and hair.

Gently massage it over the entire area for approximately one minute and rinse thoroughly with warm water.

Lather a second time and rub your scalp as you apply the shampoo Let it stay on your scalp for at least 3 minutes. That way you give the anti-dandruff ingredients time to work.

Rinse thoroughly with warm water and dry hair with towel.

Apply twice a week for 4 weeks Thereafter, once weekly as maintenance therapy or use as directed by the Physician.

4.3 Contraindications

Known hypersensitivity to the active substances ketoconazole, zinc pyrithione or to any of the excipients of the formulation.

4.4 Special warnings and precautions for use

For external use only.

In patients who have been on prolonged treatment with topical corticosteroids, it is recommended that the steroid therapy be gradually withdrawn over a period of 2 to 3 weeks, while using ketoconazole shampoo, to prevent any potential rebound effect.

Keep out of the eyes. If the shampoo should get into the eyes, they should be bathed with water.

When using this product, avoid contact with eyes. If contact occurs, rinse eyes thoroughly with water.

Stop use and ask a doctor if condition worsens or does not improve after regular use of this product as directed.

Keep out of reach of children.

If swallowed get medical help right away.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

4.6 Pregnancy and lactation

Ketoconazole

There are no adequate and well-controlled studies in pregnant or lactating

women. Data on a limited number of exposed pregnancies indicate no adverse effects of topical ketoconazole on pregnancy or on the health of the foetus/ new born child. Animal studies have shown reproductive toxicity at doses that are not relevant to the topical administration of ketoconazole. No effects on the breastfed newborn/infant are anticipated.

Plasma concentrations of ketoconazole were not detectable after topical administration of ketoconazole 2% shampoo to the scalp of non-pregnant humans. Plasma levels were detected after topical administration of ketoconazole 2% shampoo on the whole body. There are no known risks associated with the use of ketoconazole 2% shampoo in pregnancy or lactation.

Zinc Pyrithione (ZPT)
There are no adequate and well-controlled studies in pregnant or lactating women.

No reproductive effects have been observed when ZPT was applied topically to rats and rabbits up to 15 and 100 mg/kg/day of ZPT, respectively (highest doses tested). In embryofetal developmental study in rats, the no effect oral dose was 2.5 mg/kg/day for teratological effects. No reproductive or teratogenic effects have been observed in rabbits and pigs following topical application of shampoo formulations containing 50 and 400 mg/kg/day of ZPT, respectively.

4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

Ketoconazole

The safety of ketoconazole 2% shampoo was evaluated in 2890 subjects who participated in 22 clinical trials. Ketoconazole 2% shampoo was administered topically to the scalp and/or skin. Based on pooled safety data from these clinical trials, there were no ADRs reported with an incidence ≥1%.

The following table displays ADRs that have been reported with the use of ketoconazole 2% shampoo from either clinical trial or post-marketing experiences.

The displayed frequency categories use 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 clinical trial data)

System Organ Class	Adverse Drug Reactions Frequency Category **Uncommon** (≥1/1,000 to <1/100)	**Rare** (≥1/10,000 and <1/1,000)	**Not Known**
Immune System disorders		Hypersensitivity	
Nervous System Disorders		Dysgeusia	
Infections and Infestations	Folliculitis		
Eye Disorders	Increased lacrimation	Eye irritation	
Skin and Subcutaneous Tissue Disorders	Alopecia Dry skin Hair texture abnormal Rash Skin burning sensation	Acne Dermatitis contact Skin disorder Skin exfoliation	Angioedema Urticaria Hair colour changes
General Disorders and Administration Site Conditions	Application site erythema Application site irritation Application site pruritus Application site reaction	Application site hypersensitivity Application site pustules	

Pyrithione zinc
None stated.

Reporting of suspected adverse reactions
Healthcare professionals are requested to report any suspected adverse reactions via national regulatory portal or systems

4.9 Overdose

Ketoconazole

In the event of accidental ingestion, supportive and symptomatic measures should be carried out. In order to avoid aspiration, neither emesis nor gastric lavage should be instigated.

Pyrithione Zinc

No data available.

5.PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Ketoconazole

Ketoconazole is an imidazole-dioxolane antimycotic, active against yeasts, including Malassezia and dermatophytes. Its broad spectrum of activity is already well known.

Pyrithione zinc

Pyrithione zinc is an antidandruff agent.

It helps to prevent recurrence of flaking and itching associated with dandruff.

5.2 Pharmacokinetic properties

Ketoconazole

Plasma concentrations of ketoconazole were not detectable after topical administration of ketoconazole 2% shampoo on the scalp. Plasma levels were detected after topical administration of ketoconazole 2% shampoo on the whole body.

Zinc Pyrithione

No data available.

5.3 Preclinical safety data

Ketoconazole

Effects in non-clinical studies were observed only at exposures considered sufficiently in excess of the maximum human exposure indicating little relevance to clinical use.

Zinc Pyrithione

Acute oral toxicity

LD50 values for zinc pyrithione (ZPT) have been determined in various species after oral administration. The values in the rat ranged from 92 to 266 mg/kg and in the mouse from 160 to 1000 mg/kg. Six hundred mg/kg was found to be the LD50 when administered orally to dogs.

In rabbits, a shampoo containing 2% ZPT at level of 2.5, 5, 10 and 20 g/kg, no mortality was noted. No systemic effects were noted up to 10 g/kg. Slight temporary depression was seen in 2 out of 4 rabbits at 20 g/kg.

Chronic Toxicity

In a chronic oral toxicity study in rats, based on paralysis/hind-limb weakness observed, a no-observed-adverse-effect level (NOAEL) was 0.5 mg/kg/day. In a combined chronic toxicity/carcinogenicity study the oral dose of 0.5 mg/kg/day is considered as low-observed-adverse-effect-level (LOAEL) by the SCCS (Scientific Committee on Consumer Safety).

Mutagenicity / genotoxicity

ZPT is mutagenic in the mammalian mouse lymphoma assay (MLA), negative in the Ames test, and positive results are obtained in a chromosomal aberration test although at cytotoxic concentration. None of the positive results from in vitro assays were confirmed in vivo in two different mammalian erythrocyte micronucleus tests (one in mice and one in rats). Therefore, it was concluded that ZPT is not mutagenic.

Carcinogenicity

From the studies performed by the oral or dermal route with either ZPT or Sodium pyrithione (NaPT), there was no evidence for a carcinogenic potential up to dermal doses of 100 mg/kg/day and up to oral doses of 2.5 mg/kg/day of ZPT or 3.5 mg/kg/day of NaPT.

6.PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Aluminum Magnesium Silicate, Colloidal Silicon Dioxide, Hydrochloric Acid, Hypromellose 2910, 50mPa.s, Imidurea, Colour erythrosin Supra, Swiss Bouquet P3043, Plain Pearly Shampoo Base, Propylene Glycol, Purified Water.

6.2 Incompatibilities

Not Applicable.

6.3 Shelf life

24 Months

6.4 Special precautions for storage

Store below 30°C. Protect from light.

6.5 Nature and contents of container

A printed carton containing a leaflet and a printed sleeved white HDPE bottle with white coloured flip off cap containing a pink coloured viscous shampoo with pleasant odour.

6.6 Special precautions for disposal

No special requirements

7. Marketing Authorization Holder

Glenmark Pharmaceuticals Limited,
B/2 Mahalaxmi Chambers, 22,
Bhulabhai Desai Road,
Mumbai, 400 026, India.

8. Marketing Authorization Number

H2006/346

9. Date of first authorization/renewal of the authorization

2006

10. Date of revision of the text

01//07/2026