# Daktarin

## NAME OF THE MEDICINAL PRODUCT

DAKTARIN Cream
Miconazole nitrate 20 mg/g topical cream.

DAKTARIN Powder
Miconazole nitrate 20 mg/g topical powder.

DAKTARIN Lotion
Miconazole nitrate 20 mg/g topical lotion.

DAKTARIN Tincture
Miconazole 20 mg/mL topical tincture.

## QUALITATIVE AND QUANTITATIVE COMPOSITION

DAKTARIN Cream: Each gram contains 20 mg of the active substance miconazole nitrate.

DAKTARIN Powder: Each gram contains 20 mg of the active substance miconazole nitrate.

DAKTARIN Lotion: Each gram contains 20 mg of the active substance miconazole nitrate.

DAKTARIN Tincture: Each milliliter contains 20 mg of the active substance miconazole.

For excipients, see List of Excipients.

## PHARMACEUTICAL FORM

DAKTARIN Cream: White homogeneous cream for topical use.

DAKTARIN Powder: White powder for topical use.

DAKTARIN Lotion: White homogeneous emulsion for topical application to the skin or nail.

DAKTARIN Tincture: Clear, colorless solution for topical application to the nail.

## CLINICAL PARTICULARS

### Therapeutic Indications

DAKTARIN Cream

Skin infections due to dermatophytes or yeasts, and other fungi such as: *Tinea capitis, corporis, manuum, barbae, cruris, pedis* (athlete's foot).

Since DAKTARIN has an antibacterial effect on gram-positive bacteria, it may be used in mycoses secondarily infected with such bacteria (e.g. in napkin dermatitis).

DAKTARIN Powder

Usually in combination with cream or lotion:

- napkin dermatitis,
- treatment of inguinal and/or interdigital infections caused by dermatophytes or yeasts.

Since DAKTARIN has been used prophylactically in socks and shoes.

DAKTARIN Lotion

Skin and nail infections due to dermatophytes or yeasts, and other fungi such as: *tinea corporis, manuum, barbae, cruris, pedis* (athlete's foot).

Since DAKTARIN has an antibacterial effect on certain gram-positive bacteria, it may be used in mycoses secondarily infected with such bacteria.

DAKTARIN Tincture

Nail and nailbed infections caused by dermatophytes or yeasts.

Adjuvant topical medication for the treatment of onychomycosis.

Since DAKTARIN has an antibacterial effect on certain gram-positive bacteria, it may be used in mycoses secondarily infected with such bacteria.

### Posology And Method Of Administration

DAKTARIN Cream

Apply some cream to the lesions twice daily. Rub the cream into the skin with your finger until it has fully penetrated.

If the powder is used with the cream, a once daily application of both formulations is recommended.

The duration of therapy varies from 2 to 6 weeks depending on the localization and the severity of the lesion.

Treatment should be continued at least one week after disappearance of all signs and symptoms.

DAKTARIN Powder

Apply some powder to the lesions twice daily.

If the powder is used with the cream or lotion, a once daily application of both formulations is recommended.

A once daily prophylactic use of the powder in shoes and socks is sufficient.

The duration of therapy varies from 2 to 6 weeks depending on the localization and the severity of the lesion.

Treatment should be continued at least one week after disappearance of all signs and symptoms.

DAKTARIN Lotion

Skin infections:

Apply some lotion to the lesions once or twice daily. Rub the lotion into the skin with your finger until it has fully penetrated.

If the powder is used with the lotion, a once daily application of both formulations is recommended.

The duration of therapy varies from 2 to 6 weeks depending on the localization and the severity of the lesion.

Treatment should be continued at least one week after disappearance of all signs and symptoms.

Nail infections:

The infected nails should be cut as short as possible. A small amount of lotion should be applied to and rubbed into and around the infected nail by the surrounding area once or twice daily. The treated nail should be covered with an occlusive bandage.

The treatment should be continued without interruption until the growth of a new nail has set in and definite cure can be observed (rarely less than 3 months).

DAKTARIN Tincture

The infected nails should be cut as short as possible. Twice daily, a thick layer of tincture should be applied with a brush to the infected nail and the surrounding area and allowed to dry to an occlusive film. It is recommended to clean the nail and the surrounding area with acetone before every new application of the tincture.

The treatment should be continued without interruption, until a new nail has started to grow and definite cure can be observed (rarely less than 6 months).

### Contraindications

DAKTARIN Cream, Powder, Lotion, and Tincture are contraindicated in individuals with a known hypersensitivity to miconazole or another ingredient of the formulation.

### Special Warnings and Special Precautions for Use

If a reaction suggesting sensitivity or irritation should occur, the treatment should be discontinued.

DAKTARIN Cream, Powder, Lotion, and Tincture must not come into contact with the eyes.

Because the tincture is an alcoholic solution, it cannot be applied to open lesions, into the eyes or on mucous membranes.

DAKTARIN Powder contains talc. Avoid inhalation of the powder to prevent irritation of airways. In particular, when treating infants and children, careful application should be used to prevent inhalation by the child.

### Interactions with Other Medicinal Products and Other Forms of Interaction

Miconazole administered systemically is known to inhibit CYP3A4/5. Due to the limited systemic availability after topical application (see Pharmacokinetic properties), clinically relevant interactions are unlikely. However, in patients on oral anticoagulants, such as warfarin, caution should be exercised and the anticoagulant effect should be monitored. The effects and side effects of some other drugs (e.g., oral hypoglycemics and phenytoin), when co-administered with miconazole, can be increased and caution should be exercised.

### Pregnancy and Lactation

Pregnancy

DAKTARIN Cream, Powder, Lotion, and Tincture applied topically are minimally absorbed into the systemic circulation (bioavailability < 1%). Although there is no evidence that miconazole is embryotoxic or teratogenic in animals, potential hazards of prescribing DAKTARIN Cream, Powder, Lotion, or Tincture during pregnancy should always be weighed against the anticipated benefits.

Lactation

Topically applied miconazole is minimally absorbed into the systemic circulation, and it is not known whether miconazole is excreted in human breast milk. Caution should be exercised when using topically applied miconazole products during lactation. (See Interactions with other medicinal products and other forms of interaction.)

### Effects on Ability to Drive and Use Machines

Not applicable.

### Undesirable Effects

Clinical trial data

Adverse drug reactions reported among 834 patients who received miconazole 2% cream and/or placebo cream base in 21 double-blind clinical trials are presented in Table 1 below. Included in the table are all adverse events considered to be related to study drug. A dash indicates that the adverse reaction was not reported by patients in the specified treatment group.

**Table 1: Adverse drug reactions reported by patients in either treatment group in 21 double-blind clinical trials of miconazole 2% cream versus placebo.**

| System Organ Class<br>Adverse drug reaction | Miconazole 2% Cream (n= 426), % | Placebo Cream Base (n=408), % |
|---|---|---|
| *Overall adverse drug reactions* | *1.9* | *1.2* |
| **Skin and subcutaneous tissue disorders** | | |
| Skin burning sensation | 0.2 | 0.7 |
| Skin inflammation | 0.2 | -- |
| Skin hypopigmentation | 0.2 | -- |
| **General disorders and administration site conditions** | | |
| Application site irritation | 0.7 | 0.5 |
| Application site burning | 0.2 | 0.2 |
| Application site pruritus | 0.2 | -- |
| Application site reactions NOS | 0.2 | 0.2 |
| Application site warmth | 0.2 | -- |

Note: Individual patients may have reported more than a single event.

Postmarketing data

Adverse drug reactions from spontaneous reports during the worldwide post-marketing experience with DAKTARIN that meet threshold criteria are included in Table 2. The adverse drug reactions are ranked by frequency, using the following convention:

| | |
|---|---|
| Very common | ≥1/10 |
| Common | ≥1/100 and < 1/10 |
| Uncommon | ≥1/1000 and <1/100 |
| Rare | ≥1/10000, <1/1000 |
| Very rare | <1/10000, including isolated reports |

The frequencies provided below reflect reporting rates for adverse drug reactions from spontaneous reports, and do not represent more precise estimates of incidence that might be obtained in clinical or epidemiological studies.

**Table 2: Postmarketing reports of adverse drug reactions**

| | |
|---|---|
| **Immune system disorders** | |
| *Very rare* | anaphylactic reaction, hypersensitivity, angioneurotic edema |
| **Skin and subcutaneous tissue disorders** | |
| *Very rare* | urticaria, contact dermatitis, rash, erythema, pruritus, skin burning sensation |
| **General disorders and administration site conditions** | |
| *Very rare* | application site reactions, including application site irritation |

### Overdose

Cream, Powder, Lotion

*Symptoms*

Topical use: Excessive use can result in skin irritation, which usually disappears after discontinuation of therapy.,

*Treatment*

Accidental ingestion: DAKTARIN Cream, Powder, and Lotion are intended for topical use, not for oral use. Should accidental oral ingestion of large quantities of these products occur, an appropriate method of gastric emptying may be considered if considered necessary.

Accidental inhalation of talc-containing powder: Massive accidental aspiration of DAKTARIN Powder may cause impaction blockage of airways. Respiratory arsenal should be treated with intensive support, including oxygen.

If respiration is compromised, endotracheal intubation, removal of impacted material, and assisted breathing should be considered.

Tincture

*Symptoms*

Topical use: Excessive use can result in skin irritation, which usually disappears after discontinuation of the therapy.

Accidental ingestion: Stomach irritation may occur.

*Treatment*

Accidental ingestion: A specific antidote is not available. Treatment is symptomatic and supportive. However, the quantity of alcohol that has been ingested must be taken into account, especially in children.

## PHARMACOLOGICAL PROPERTIES

### Pharmacodynamic Properties

Pharmacotherapeutic classification: (Antifungals for dermatological/topical use; imidazole derivative.)

*ATC code:* D01AC02

Miconazole combines an antifungal activity against the common dermatophytes, yeasts and various other fungi with an antibacterial activity against certain gram-positive bacilli and cocci.

Miconazole inhibits the biosynthesis of ergosterol in fungi and changes the composition of other lipid components in the membrane, resulting in fungal cell necrosis.

Miconazole has also been proven to be effective in secondarily infected mycoses.

Usually, miconazole acts very rapidly on pruritus, which frequently accompanies dermatophyte and yeast infections. This symptomatic improvement is seen before the first signs of healing are observed.

### Pharmacokinetic Properties

**Absorption:** Miconazole remains in the skin after topical application for up to 4 days. Systemic absorption of miconazole is limited, with a bioavailability of less than 1% following topical application of miconazole. Plasma concentrations of miconazole and/or its metabolites were measurable 24 and 48 hours after application.

Systemic absorption has also been demonstrated after repeated application of miconazole to infants with diaper dermatitis. Plasma levels of miconazole were undetectable or low in all infants.

**Distribution:** Absorbed miconazole is bound to plasma proteins (88.2%) and red blood cells (10.6%).

**Metabolism and Excretion:** The small amount of miconazole that is absorbed is eliminated predominantly in feces as both unchanged drug and metabolites over a four-day post-administration period. Similar amounts of unchanged drug and metabolites also appear in urine.

### Preclinical Safety Data

Preclinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, single and repeated dose toxicity, genotoxicity, and toxicity to reproduction.

## PHARMACEUTICAL PARTICULARS

### List of Excipients

DAKTARIN Cream: The cream formulation consists of PEG-6 (and) PEG-32 (and) glycol stearate, oleoyl macrogolglycerides, liquid paraffin, benzoic acid, butylated hydroxyanisole, purified water.

DAKTARIN Powder: The powder formulation consists of talc, zinc oxide, colloidal silicon dioxide.

DAKTARIN Lotion: The lotion formulation consists of PEG-6 (and) PEG-32 (and) glycol stearate, oleoyl macrogolglycerides, liquid paraffin, benzoic acid, butylated hydroxyanisole, purified water.

DAKTARIN Tincture: The tincture formulation consists of acrylic/acrylic copolymer, propylene glycol and alcohol.

### Incompatibilities

None known

### Shelf Life

Observe expiry date on the outer pack.

### Special Precautions for Storage

DAKTARIN Cream: Store at 25°C or below.

DAKTARIN Powder: Store between 15 and 30° C.

DAKTARIN Lotion: Store between 15 and 30° C. Protect from excessive heat.

DAKTARIN Tincture: Store between 15 and 30° C.

Keep DAKTARIN Cream, Powder, Lotion, and Tincture out of reach of children.

### Nature and Contents of Container

Daktarin cream is supplied in tubes of 15 g and 30 g.

Daktarin powder is supplied in shakers of 20 g.

Daktarin lotion is supplied in pumps of 30 g, containing no propelling gas.

Daktarin tincture (containing 20 mg of miconazole per ml) is supplied in 30 ml bottles (with brush).

### Instructions for Use and Handling -and Disposal-

DAKTARIN Cream: To open the tube, unscrew the cap. Then pierce the seal of the tube with the pin on the top of the cap.

DAKTARIN Powder: Not applicable.

DAKTARIN Lotion: Shake the pump before use and press the pump a few times before spraying.

DAKTARIN Tincture: Use the brush attached to the cap of the bottle to apply the tincture.

## DATE OF REVISION OF THE TEXT

November 2004