Safeguarding public health

LAMISIL NCH 1 % CUTANEOUS SOLUTION

PL 00030/0214

UKPAR

LAMISIL NCH 1 % CUTANEOUS SOLUTION

As this marketing authorisation is a duplicate of Lamisil Once 1 % Cutaneous Solution please refer to PL 00030/0213 for the complete report. See below for the Summary of Product Characteristics and product labelling for Lamisil NCH 1 % Cutaneous Solution.

Product Summary

1. NAME OF THE MEDICINAL PRODUCT

Lamisil® NCH™ 1% cutaneous solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each gram contains 10 mg terbinafine (as hydrochloride).

For excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Cutaneous solution.

Clear to slightly opaque viscous solution.

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

Treatment for tinea pedis (athlete's foot).

4.2. Posology and method of administration

Adults 18 years of age and over: single administration.

Lamisil NCH should be applied once on both feet, even if lesions are visible on one foot only. This ensures elimination of the fungi (dermatophytes) that might be found in areas of the foot where no lesions are visible.

Patients should wash and dry both feet and hands before applying the product. They should treat one foot, then the other.

Starting between the toes, patients should apply a thin layer evenly between and all around the toes, as well as cover the sole and sides of the foot for up to 1.5 cm. The product should be applied in the same way to the other foot, even if the skin looks healthy. The product should be left to dry to a film for 1-2 minutes. Patients should then wash their hands. Lamisil NCH should not be massaged into skin.

For the best results, the treated area should not be washed for 24 hours after application. It is therefore recommended to apply Lamisil NCH after a shower or bath and wait until the same time the following day before washing the feet again.

Patients should use the quantity they need to cover both feet as instructed above. Any unused medication is to be discarded.

Relief of clinical symptoms usually occurs within a few days. If there are no signs of improvement after one week, patients should see a doctor. There are no data on repeated treatment with Lamisil NCH. Therefore a second treatment cannot be recommended within a particular episode of athlete's foot.

Children:
Lamisil NCH has not been studied in the paediatric population. Its use is therefore not recommended in patients below 18 years of age.

The elderly:
There is no evidence to suggest that elderly patients require different dosages or experience side effects different from those in younger patients.

4.3. Contraindications

Hypersensitivity to terbinafine or any of the excipients (see 6.1. List of excipients).

4.4. Special warnings and precautions for use

Lamisil NCH is not recommended to treat hyperkeratotic chronic plantar tinea pedis (moccasin type).

Lamisil NCH is for external use only. It should not be used on the face; it may be irritating to the eyes. In case of accidental contact with the eyes, rinse eyes thoroughly with running water. Do not swallow.

In the unlikely event of allergic reaction, the film should be removed with an organic solvent such as denatured alcohol and the feet washed with warm soapy water.

Contains ethanol; keep away from naked flames

4.5. Interactions with other medicinal products and other forms of interaction

No drug interactions are known with use of topical Lamisil formulations.

4.6. Pregnancy and lactation

Animal studies did not reveal any teratogenic or embryofoetotoxic potential of terbinafine. No cases of malformations in humans have been reported with terbinafine to date. However, since clinical experience in pregnant women is very limited, Lamisil NCH should be used only if clearly indicated during pregnancy.

Terbinafine is excreted in breast milk, and therefore mothers should not receive Lamisil NCH whilst breast-feeding.

4.7. Effects on ability to drive and use machines

Cutaneous application of Lamisil NCH does not affect the ability to drive and use machines.

4.8. Undesirable effects

Undesirable effects include mild and transient reactions at the site of application. In very rare instances, allergic reactions may occur.

Skin and subcutaneous tissue disorders:

Very rare (<1/10,000, including isolated reports): allergic reactions such as rash, pruritus, dermatitis bullous and urticaria.

General disorders and administration site conditions

Uncommon (>1/1,000, <1/100): application site reactions such as skin dryness, skin irritation or burning sensation.

4.9. Overdose

Overdose is very unlikely to happen since the product is for single dose, cutaneous use, and the tube only contains the necessary quantity for one application. Accidental ingestion of one 4 g tube of product which contains 40 mg terbinafine is much lower than one 250 mg Lamisil tablet (oral unit dose). Should several tubes be ingested however, adverse effects similar to those observed with an overdose of Lamisil tablets (e.g. headache, nausea, epigastric pain and dizziness) are to be expected.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Pharmacotherapeutic group: Antifungal for topical use (ATC code D01 A E15)

Terbinafine is an allylamine which has a broad spectrum of antifungal activity in fungal infections of the skin caused by dermatophytes such as *Trichophyton* (e.g. *T. rubrum, T. mentagrophytes, T. verrucosum, T. violaceum), Microsporum canis* and *Epidermophyton floccosum*. At low concentrations terbinafine is fungicidal against dermatophytes and moulds. The activity against yeasts is fungicidal (e.g. *Pityrosporum orbiculare* or *Malassezia furfur)* or fungistatic, depending on the species.

Terbinafine interferes specifically with fungal sterol biosynthesis at an early step. This leads to a deficiency in ergosterol and to an intracellular accumulation of squalene, resulting in fungal cell death. Terbinafine acts by inhibition of squalene epoxidase in the fungal cell membrane. The enzyme squalene epoxidase is not linked to the cytochrome P450 system. Terbinafine does not influence the metabolism of hormones or other drugs.

Studies in patients have shown that a single dose application of Lamisil NCH 1 % cutaneous solution on both feet demonstrated efficacy in patients with tinea pedis (athlete's foot) presenting lesions between the toes, and extending to adjacent skin areas of the sides and soles of the feet. The rate of relapse/reinfection at 3 months after treatment was low: 1 person out of 8 (12.5%).

5.2. Pharmacokinetic properties

Once applied to the skin, Lamisil NCH 1 % cutaneous solution forms a film on the skin. Terbinafine in the film stays on the skin for up to 72 hours. The film quickly delivers terbinafine to the stratum corneum: at 60 minutes after application, 16 to 18% of the applied dose will be present in the stratum corneum. Delivery progressively continues and terbinafine persists in the stratum corneum for up to 13 days, at levels which are in excess of the in vitro Minimum Inhibitory Concentration for terbinafine against dermatophytes.

Systemic bioavailability is very low. An application of Lamisil NCH 1 % cutaneous solution on the back, on an area of 3 times the area of both feet, resulted in exposure to terbinafine of less than 0.5% of the exposure following oral administration of a 250 mg tablet.

5.3. Preclinical safety data

In long-term studies (up to 1 year) in rats and dogs no marked toxic effects were seen in either species up to oral doses of about 100 mg/kg a day. At high oral doses, the liver and possibly also the kidneys were identified as potential target organs.

In a two-year oral carcinogenicity study in mice, no neoplastic or other abnormal findings attributable to treatment were made up to doses of 130 (males) and 156 (females) mg/kg a day. In a two-year oral carcinogenicity study in rats at the highest dose level, 69 mg/kg a day, an increased incidence of liver tumours was observed in males. The changes, which may be associated with peroxisome proliferation, have been shown to be species-specific since they were not seen in the carcinogenicity study in mice or in other studies in mice, dogs or monkeys.

During the studies of high dose oral terbinafine in monkeys, refractile irregularities were observed in the retina at the higher doses (non-toxic effect level was 50 mg/kg). These irregularities were associated with the presence of a terbinafine metabolite in ocular tissue and disappeared after drug discontinuation. They were no associated histological changes.

A standard battery of *in vitro* and *in vivo* genotoxicity tests revealed no evidence of a mutagenic or clastogenic potential for the drug.

No adverse effects on fertility or other reproduction parameters were observed in studies in rats or rabbits.

Repeated dermal administration of Lamisil NCH 1 % cutaneous solution in rats and minipigs produces plasma terbinafine levels which are at least 50-100 times lower than the no-adverse-effect-levels established in terbinafine animal toxicity studies, so use of the product is not expected to produce any systemic adverse effect. Lamisil NCH 1 % cutaneous solution was well tolerated in a variety of tolerability studies and did not cause sensitisation.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

Acrylates/octylacrylamide copolymer;
hydroxypropylcellulose;
medium chain triglycerides;
ethanol.

6.2. Incompatibilities

Not applicable.

6.3. Shelf life

3 years

6.4. Special precautions for storage

Store in the original package. There is no special temperature precaution for storage.

6.5. Nature and contents of container

4 g aluminium laminated tube (polyethylene-aluminium-polyethylene) with a polyethylene screw cap.

6.6. Instruction for use and handling (and disposal)

No special requirements.

Administrative Data

7. MARKETING AUTHORISATION HOLDER

Novartis Consumer Health,
Horsham,
RH12 5AB,
UK

8. MARKETING AUTHORISATION NUMBER

PL 00030/0214

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

4 November 2005

PATIENT INFORMATION LEAFLET

Lamisil® NCH™ 1% cutaneous solution

LAMISIL®
NCH™
1% cutaneous solution
Terbinafine hydrochloride

Please read this leaflet carefully before you start using Lamisil® NCH™ 1% cutaneous solution.
It contains important information for you.
Keep this leaflet with the medicine, you may need to read it again.

Athlete's foot is a common fungal infection of the feet and can cause real discomfort. Lamisil NCH has been specially developed to treat athlete's foot in one single application. You should follow the instructions for use carefully to obtain the best results.

- *Ask a doctor or a pharmacist for advice if you are in any doubt.*
- *See a doctor or pharmacist if your symptoms do not improve within 1 week after using Lamisil NCH.*

This leaflet contains information on:

Lamisil NCH is a clear to slightly cloudy gel-like solution, which, upon application on the feet, leaves a smooth, barely visible film that stays on the skin. The film delivers the active substance into the skin. Delivery progressively continues to kill the fungus that causes athlete's foot.

Lamisil NCH contains 10 mg of the fungicidal active substance terbinafine (as hydrochloride) per 1 g of solution. The other ingredients are acrylates/octyl-acrylamide copolymer, hydroxypropylcellulose, triglycerides and ethanol.
Lamisil NCH is a preparation for a single dose application. It is available in tubes of 4 g.

Product licence holder/manufacturer
Novartis Consumer Health
Horsham, RH12 5AB, UK

1. WHAT IS LAMISIL NCH AND WHAT IS IT USED FOR?

Lamisil NCH is used to treat athlete's foot. It works by killing the fungi which cause athlete's foot.

How do you know that you have athlete's foot?
Athlete's foot (tinea pedis) appears only on the feet (usually both), where it often appears between the toes, and can spread to the sole and sides of the feet. The most common type of athlete's foot causes cracking or scaling of the skin, but you may also have mild swelling, blisters, or weeping sores. This may often be associated with itching or burning sensations.

If you are not sure about the cause of your condition, please talk to your doctor or pharmacist before using Lamisil NCH.

2. CHECK BEFORE YOU USE LAMISIL NCH

When you must not use it:
Do not use *Lamisil NCH* if you are allergic to any of the ingredients in this medicine (see the list of ingredients at the beginning of this leaflet).

Take special care with Lamisil NCH:
Lamisil NCH is for treating the skin of the feet only. Be careful not to get the product on your face and eyes, or damaged skin (other than the treatment site) as it could be irritating. If you get it accidentally into your eyes, rinse thoroughly with running water. If any discomfort persists, see your doctor. Do not swallow.

Lamisil NCH is not recommended for long-term fungal infection of the soles and heels of the feet with associated thickening and/or pronounced flaking of the skin. If you think you might have this condition, you should consult your doctor.

If you have fungal nail infection (fungus inside and under the nail), with discoloration of the nails and change in nail texture (thick, flaky), do not use *Lamisil NCH* but consult a doctor. You may require prescription medication for your nail infection.

If you are pregnant or breast-feeding:
If you are pregnant, ask your doctor or pharmacist before using *Lamisil NCH*.
Do not use *Lamisil NCH* while breast-feeding.

Lamisil NCH and children:
Do not use this medicine on patients under 18 years of age.

Taking other medicines:
Before using Lamisil NCH tell your doctor or pharmacist about any other medicines you are taking, or have recently taken, including any you have bought without medical prescription.
Do not apply other medicinal products on the treated areas.

3. HOW TO USE LAMISIL NCH?

For adults:
Lamisil NCH is to be applied only once. You have to apply the product on both feet (between and over the toes, sole and sides of the feet), even if symptoms are visible only on one foot. This ensures the elimination of the fungus responsible for your infection which might be present in other areas of the feet even if no lesions are visible.

When applied on the feet, the medication dries quickly to a colourless film. The tube has enough medication to treat both feet. Follow the instructions carefully to get the best results.

When you use Lamisil NCH:
Lamisil NCH delivers the active into the skin where it persists for a number of days to eliminate the fungus that causes athlete's foot. To get the best results, feet should not be washed or splashed for 24 hours after the application. It is therefore recommended to apply *Lamisil NCH* after a shower or a bath, and wait 24 hours before washing your feet again.

Before you use Lamisil NCH:
- Wash both feet and dry them carefully.
- Wash and dry your hands.
- Remove the cap from the tube.

How to use Lamisil NCH:
- This is a single application treatment.
- Apply to both feet. Finish one foot before treating the other.
- Use about half the tube for each foot, as needed to cover skin.
- Apply to each foot with fingers as shown in the accompanying diagrams: apply first between, under, and over all toes. Then apply over sole and sides of your foot

- Treat the other foot in the same way, even if your skin looks healthy.
- Spread evenly. Do not massage into skin.
- Do not apply to skin a second time.
- Leave the product to dry to a film for 1-2 minutes, before wearing your normal footwear.
- Replace the cap on the tube and discard any remaining product. Do not keep or give the remaining product to other people.
- Wash your hands with warm soapy water after the application.

The film left on your skin after applying the product, even if it is barely visible, will continue to work killing the fungi for several days after the single-dose application. Your skin condition should start to improve within a few days. Even though *Lamisil NCH* will begin to kill the fungi immediately after single application, it may take up to 4 weeks for your skin to heal completely.

Few people suffering from athlete's foot (1 person out of every 8), experience relapse or reinfection within three months of treatment with this product.

If you have not noticed any signs of improvement within 1 week after applying *Lamisil NCH*, please see your doctor or pharmacist who will advise you. Do not use the product a second time for a particular athlete's foot episode if it did not work after the first application.

To help with treatment:
To help the treatment, keep the affected area clean by washing it regularly after the first 24 hours. Dry it carefully without rubbing. Try not to scratch the area although it may be itchy, because this could cause further damage and slow the healing process or spread the infection.

Because these infections can be passed on to other people, remember to keep your own towel and clothes and do not share them with others. To protect yourself from reinfection, these should be washed frequently.

What if you accidentally swallow some of the product?
If you or someone else accidentally swallows the product, *please tell your doctor who will advise you what to do.*

4. POSSIBLE SIDE EFFECTS

All medicines can cause unwanted effects in some people, and it is important to note the following:

In very rare instances, people may be allergic to the product, which could cause skin rash, itching, blistering of the skin, or hives (less than 1 person out of 10,000 is expected to suffer from allergy). In the unlikely event that you experience an allergic reaction or any of the above symptoms when using this product, remove the film with denatured alcohol, wash your feet with warm soapy water, rinse-off and consult your doctor or pharmacist.

Other side effects which may occur at the application site are uncommon (1 to 10 people out of 1,000), and usually mild, transient and harmless. These effects may include skin dryness, skin irritation or burning sensation after application. If you are nevertheless concerned, tell a doctor or pharmacist.

If you notice any side effects not mentioned in this leaflet, please tell your doctor or pharmacist.

5. STORING LAMISIL NCH

Keep all medicines out of the reach and sight of children.
Do not use or keep this medicine after the expiry date shown on the box and on the tube.
Store in the original container in order to protect from light. There is no special temperature precaution for storage.
Contains ethanol, keep away from naked flames.
This leaflet was last approved on: October 2005.

GB 892442

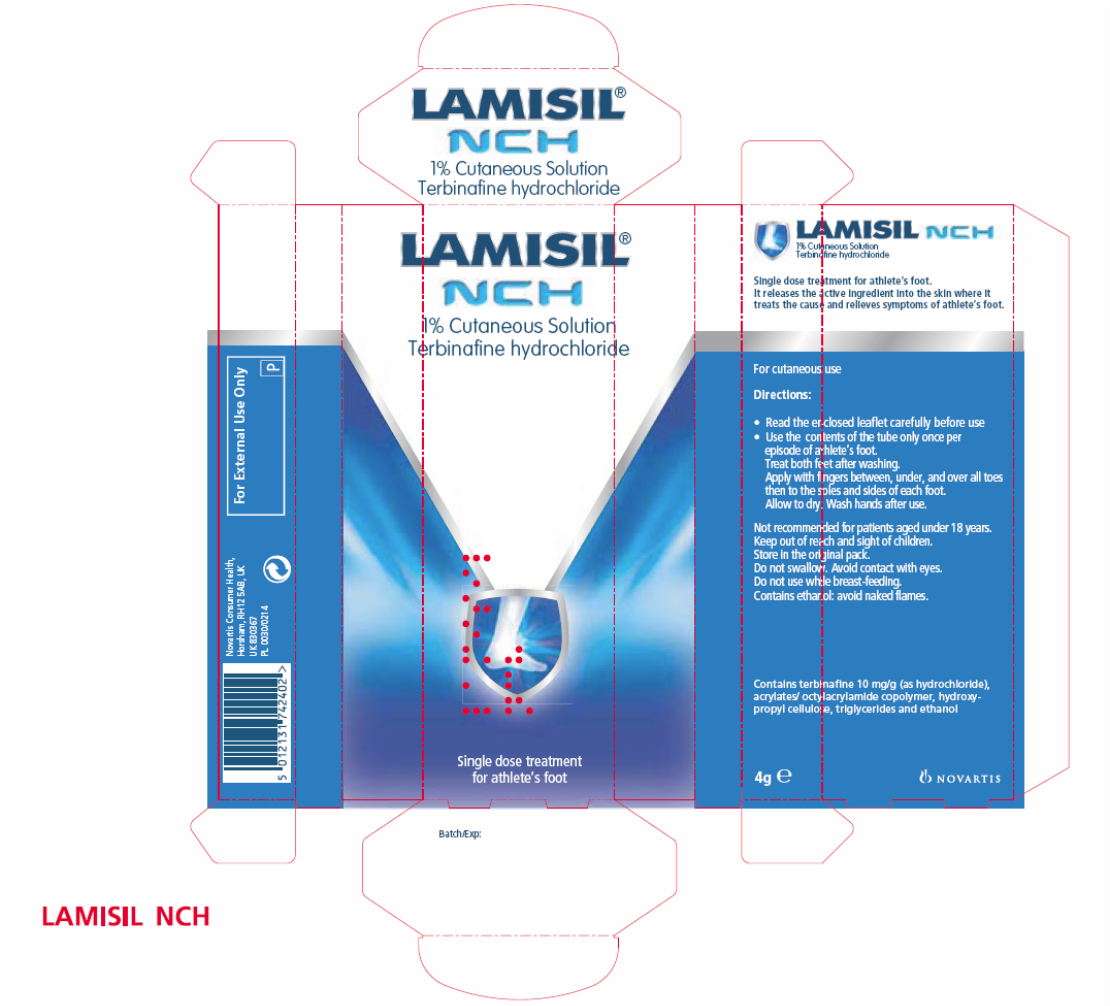
NOVARTIS

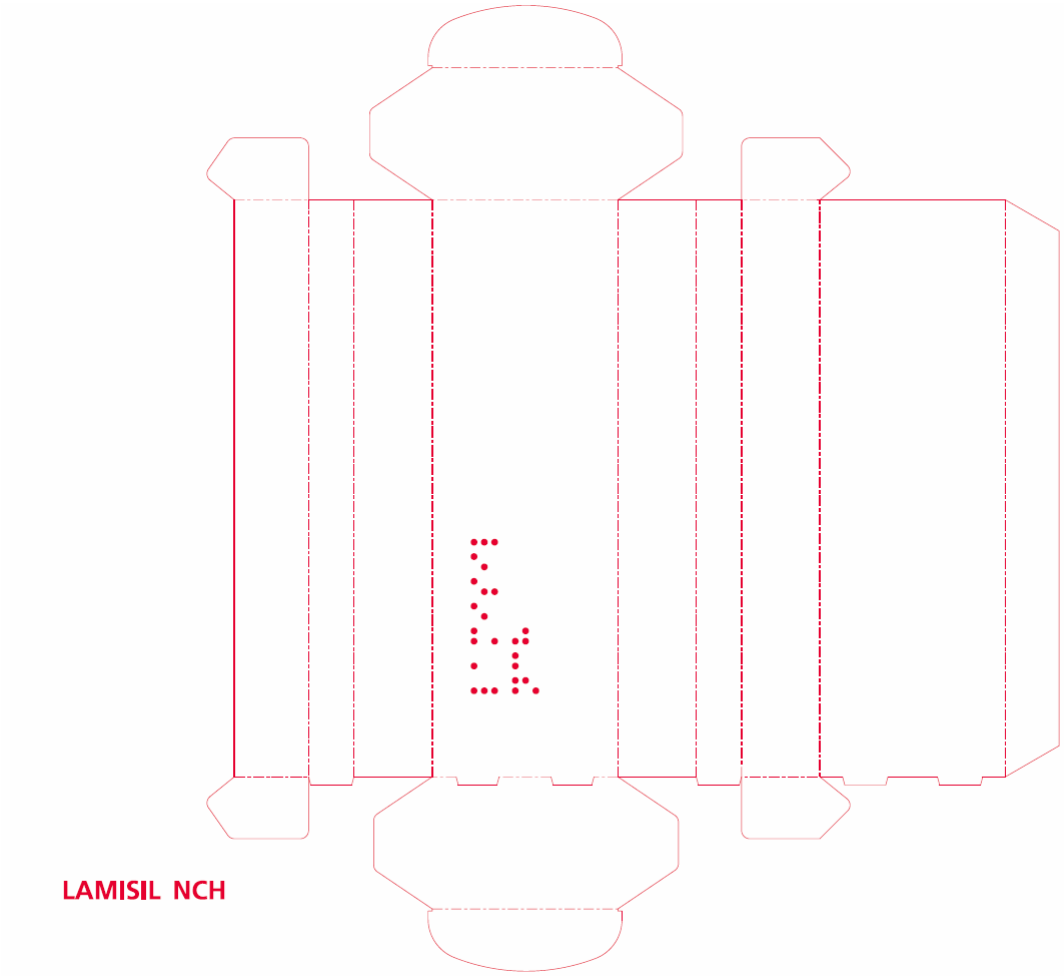
LABELLING

Lamisil® NCH™ 1% cutaneous solution tube labelling

	Local language	Translation
Preprinted	BN / Exp. Date:	LOT / EXP

Lamisil® NCH™ 1% cutaneous solution carton label with Braille




LAMISIL NCH