SWIX

NORDIC SKI PREPARATION

Waxing Guide for Skating and Classic Skiing

swixschool.com
This manual is not directed towards World Cup racers, but rather to frequent skiers keen to keep in shape.

- **Waxing profile T0769 with legs T79-1**

- **Fibertex T266N** for removal of oxidation on new ski bases

- **Plexi Scraper T823** for removing glide wax

- **Waxing Iron T74220**

- **Bronze Brush T162B** for brushing the glider out of the base structure

- **Fiberlene Cleaning Towel T151**

- **Combi Cork T11** with sandpaper to be used on the kick zone

- **Groove Scraper T87**

- **Base Cleaner I63N with fibertex applicator**

- **Ski straps R402**

- **Wax Scraper T85**

Swix SPORT - NORDIC SKI PREPARATION
Swix takes pride in its more than 50 year history as one of the strongest and most recognized brand names in skiing.

Followed by pioneering research work in 1946, the Astra Pharmaceutical Company introduced revolutionary ski waxes based upon fully synthetic materials. The new 3-colored system was a breakthrough for all skiers, and de-mystified and simplified waxing. The new Swix system of waxing replaced unscientific and often secret concoctions of tar, beeswax, melted bicycle tire inner rubes and phonograph records, to mention just a few of the obscure ingredients. Before long, Swix waxes were discovered the world over, and recreational skiers and racers alike realized a new level of enjoyment and success.

Since 1986 Swix has been located in Lillehammer, Norway where all wax production takes place. This is an ideal area for testing and developing new products having close access to cross country trails and alpine areas.

Traditionally famous for its XC-waxes, today Swix is also the number one alpine ski wax company. We are present at all big events on the World Cup for cross-country, alpine and snowboard. The most important markets are Japan, Russia, USA and the Nordic Countries. Swix is owned by the industrial group FERD.

Follow the guidelines found in this manual and we can promise better and more enjoyable skiing.
NEW SKATING SKIS/CLASSIC SKIS GLIDEZONES

1. **Base conditioning**
The preparation of new skis starts with Fibertex treatment (T265), 8-10 passes in both directions along the base. Polyethylene hairs and micro-burrs are removed, and the base surface is “opened” for better glide wax absorption.

**NB! Only in the glide zones.**

2. **Hot wax Cleaning**
Cleaning by hot-waxing and scraping using a soft wax, removes dirt and saturates the base. Recommended are warm temperature waxes such as CH10, CH8 or BP99. The temperature of the waxing iron should not exceed 120°C.

**Note: No glide wax in the kick zone.**

3. **Ironing**
Start at the tip moving the iron towards the tail in a continuous movement to prevent overheating of the base.

4. **Groove scraping**
While the wax is still warm, remove all wax out of the groove and on the side-edges with the Scraper (T87 or T88). Do this before scraping the base to prevent scratches if the groove scraper unintentionally happens to jump out of the groove.

5. **Base scraping**
Scrape off the wax with a sharp Plexi Scraper (T823) while the wax is still warm (wax-cleaning method). Do not press too hard. Keeping the scraper sharp means light strokes can be used to remove the excess wax without harming the base. T408 keeps the Plexi Scraper sharp.

6. **Brushing**
Use a Bronze Brush (T162) tip to tail 10-20 times.

**Note: No brushing in the kick zone.**

7. Finally, use a soft wax, such as CH8, to saturate the base to prevent dry bases and to give optimal glide. Repeat the process two times from Step 2 to 6, but let the skis cool to room temperature (15 minutes), before Step 4, 5 – Scraping.

**Skis having a new stone grind should be treated also as from step 1 to 7.**
GLIDE WAX FOR THE DAY FOR SKATING SKIS/CLASSIC SKIS GLIDEZONES

Three glide waxes will cover most snow conditions:
CH8 (or LF8) for normal winter conditions from +1°C to -4°C (34°F to 25°F),
CH10 (or LF10) for wet snow (free water), and
CH7 (or LF7) for cold snow.

1. **Base conditioning**
   Before the application of actual wax for the day, make 4 or 5 passes with the Bronze Brush (T162) to re-new and clean the base, ensuring maximum wax absorption.

2. **Hot wax application**
   Set the Waxing Iron to the recommended temperature shown on the wax package. The waxes should easily melt. Let the wax drip onto base, holding the iron approx. 5 cm above the ski.
   **Remember:** No glide waxes in the kick zone of Classic skis!

3. **Ironing**
   Go from tip to tail, constantly moving the iron to prevent over-heating the base. Let the skis cool for 5 to 10 minutes.

4. **Groove scraping**
   Remove all wax out of the groove with the Groove Scraper (T87 or T88).

5. **Base scraping**
   Scrape the base with a sharp Plexi Scraper (T823). Do not press too hard. T408 keeps the Plexi Scraper sharp.

6. **Brushing**
   Brush the base with a Bronze Brush (T162) from tip to tail approx. 20 times. This will remove wax from the base structure (grinding pattern) to give better glide.
   **Note:** Do not brush in the kick zone of Classic skis.
Swix Glide Waxes

CH AND LF CATEGORIES

Three glide waxes are sufficient to obtain good glide on most snow conditions: CH10 (or LF10) for very wet snow from +10°C to 0°C (50°F to 32°F), CH8 (or LF8) in normal winter-conditions from +1°C to -4°C (34°F to 25°F), and CH7 (or LF7) for colder than -4°C (25°F).

Note: All Swix temperatures are air temperatures in the shade.

CH7 Violet
Cold snow. -2°C (28°F) and colder.
Recommended iron setting: 135°C (275°F).

CH8 Red
For normal winter conditions. +1°C to -4°C (34°F to 25°F). Also for saturating the bases of new skis. Will always improve the glide, even beyond its ideal range.
Recommended iron setting: 120°C (250°F).

CH10 Yellow
For very wet snow (free water in the snow). +10°C to 0°C (50°F to 32°F). Often used to saturate the bases of new skis due to its softness and penetration potential.
Recommended iron setting: 110°C (230°F).

LF7 Violet
Fluorocarbon Glide Wax. -2°C and colder (28°F and colder). For cold conditions and high humidity.
Recommended iron setting: 135°C (275°F).

LF8 Red
Fluorocarbon Glide Wax. +1°C to -4°C (34°F to 25°F). For normal winter conditions and high air humidity. The fluorocarbon additive definitely improves glide around the freezing point and moist snow.
Recommended iron setting: 120°C (250°F).

LF10 Yellow
Fluorocarbon Glide Wax. +10°C to 0°C (50°F to 32°F). For very wet snow. The fluorocarbon additive will improve glide and increase dirt resistance.
Recommended iron setting: 110°C (230°F).
TREATMENT OF THE KICK ZONE

The stiffness of the skis is very important for obtaining the combination of good glide and good kick. Take care when selecting skis.

For optimal function of the kick waxes, accurate matching of ski stiffness to skier weight is necessary. At the moment of kick, having full weight on one ski, the ski should have sufficient contact with the snow. However, skis that are too soft will reduce the gliding properties and cause unnecessary wear of the kick wax. Reputable ski shops will have good methods and instruments to match ski stiffness to body weight.

The waxing of the kick zone should take place after finishing the glide zones. The length of the kick zone should be in the range of 75 cm for both klister and hard wax. Generally the kick zone is measured from the heel of the binding and forward.

Don’t be afraid to extend the kick zone forward if the skis are slipping. A longer kick zone has less influence on glide than what you might imagine, and having good kick will make the ski tour much more enjoyable.

KICK ZONE (KLISTER=HARD WAX)
1. Sanding  
The kick zone should first be sanded with #100 grit sandpaper approx. 60 cm (about 2 feet). Sand the zone back and forth parallel to the length of the ski. The Swix Combi Waxing Cork (T11) with sandpaper on one side is an ideal tool.

2. Base wax  
At temperatures below 0°C (32°F) a relatively hard wax, such as V30 Blue, is recommended as a base-wax. Base Binder VG35 is applied as the first layer when the snow becomes coarser.

3. Ironing base wax  
The first layer of wax should be ironed into the base. The heat will improve the bond between the wax and base giving longer wear. Iron setting should be 100°C (212°F).

4. Hard wax application  
The actual hard wax should be applied in 4-5 thin layers, smoothing each layer with the cork. Above freezing and wet snow 2 layers are sufficient.

**Note:** Leave 2 cm (1 inch) at each end of the kick zone. With corking, the wax is expanded into these areas.

5. Corking  
Corking in between each layer of wax.
Swix Hard Waxes

The V-line is made both for racing and ski touring. The high quality is due to high-grade raw materials and proven formulas that are continually adjusted to improve effectiveness.

Along with the two temperature ranges shown on the label are two snow-type symbols. One for new and falling snow, and one for older, fine grained snow.

Note: All temperatures given on Swix waxes are air temperatures measured in the shade.

Waxing for new snow and fine grained snow
On new snow a harder (colder) wax is applied than on older snow. The reason for this is that new snow crystals are sharper and have better penetration into the wax giving better kick. Older snow particles are more rounded and a softer wax is needed to get sufficient kick.

Therefore Swix has introduced a system showing two different temperature intervals on all waxes, one for the new snow and one for the older snow. This makes it easier to find the right wax. Do not be concerned about applying a wax that is one step “warmer” than what the temperature is indicating if the snow has become coarser. Normally the snow transforms from new to fine grained after a couple of days, although this process might happen faster close to 0°C (32°F).

### V20 GREEN
- New fallen snow: -8°C to -15°C (18°F to 5°F)
- Old, transformed snow: -10°C to -18°C (12°F to 0°F)

### V30 BLUE
- New fallen snow: -2°C to -10°C (28°F to 14°F)
- Old, transformed snow: -5°C to -15°C (23°F to 5°F)

### V40 BLUE EXTRA
- New fallen snow: -1°C to -7°C (30°F to 19°F)
- Old, transformed snow: -3°C to -10°C (27°F to 12°F)

### V45 VIOLET SPECIAL
- New fallen snow: 0°C to -3°C (32°F to 27°F)
- Old, transformed snow: -2°C to -6°C (28°F to 21°F)

### V50 VIOLET
- New fallen snow: 0°C to -1°C (32°F to 30°F)
- Old, transformed snow: -1°C to -3°C (30°F to 27°F)

### V55 RED SPECIAL
- New fallen snow: +1°C to 0°C (34°F to 32°F)
- Old, transformed snow: 0°C to -2°C (32°F to 28°F)

### V60 RED/SILVER
- New fallen snow: +3°C to 0°C (38°F to 32°F)
- Old, transformed snow: +1°C to -1°C (34°F to 30°F)
Swix VR Hard Waxes (Krystal Line)

- Wider ideal range
- Better glide
- Reduced risk of icing-up

The VR waxes are fluorinated and formulated for top racing, but also have proved interesting for recreational and sport skiers because of their excellent properties, particularly around 0°C (32°F).

These hard waxes are characterized by a high degree of flexibility. Each VR-wax has two specified temperature ranges, one for falling and new fallen snow.

**VR30 LIGHT BLUE**
Designed for cold to extremely cold conditions.

- New fallen snow
  -7°C to -20°C (19°F to -4°F)
- Old, transformed snow
  -10°C to -30°C (14°F to -22°F)

**VR40 BLUE**
For normal, subfreezing temperatures.

- New fallen snow
  -2°C to -8°C (28°F to 18°F)
- Old, transformed snow
  -4°C to -12°C (25°F to 10°F)

**VR45 FLEXI**
Light violet. A flexible wax for temperatures around freezing and colder.

- New fallen snow
  0°C to -2°C (32°F to 28°F)
- Old, transformed snow
  -2°C to -8°C (28°F to 18°F)

**VR50 VIOLET**
Designed for moist to dry snow around freezing 0°C (32°F). When used below freezing, the snow must be transformed.

- New fallen snow
  +1°C to 0°C (34°F to 32°F)
- Old, transformed snow
  0°C to -4°C (32°F to 25°F)

**VR55 SILVER/VIOLET**
For moist snow around freezing and for older, more coarse snow just below freezing. Perfect balance between kick and glide.

- New fallen snow
  +2°C to 0°C (36°F to 32°F)
- Old, transformed snow
  0°C to -3°C (32°F to 27°F)

**VR60 SILVER**
Designed for moist snow. When used below freezing high humidity and transformed snow is required.

- New fallen snow
  +2°C to 0°C (36°F to 32°F)
- Old, transformed snow
  +1°C to -2°C (34°F to 28°F)
New fallen snow  
0°C to +3°C (32°F to 38°F)

Old, transformed snow  
+1°C to -1°C (34°F to 30°F)

**VR65 RED/YELLOW/SILVER**  
For moist snow. Excellent wax on fresh slightly wet to moist snow.

New fallen snow  
+1°C to +3°C (34°F to 38°F)

Old, transformed snow  
0°C to +2°C (32°F to 36°F)

**VR70 KLISTERWAX**  
Red. For wet and moist new snow. Works also on wet transformed snow down to 0°C (32°F). Apply thicker if very wet.

New fallen snow  
+2°C to +5°C (36°F to 41°F)

**VR75 KLISTERWAX SOFT**  
Yellow. For wet snow, glazy tracks. Must be applied evenly. To be used in maintained tracks only.

Snow, characterized by sharp snow crystals with relatively strong penetration capacity, and one range for older snow, when the crystals are more rounded and have less penetration power.

**NOTE:** All Swix temperatures are air temperatures in the shade.
APPLICATION OF KLISTER

Klisters are generally used when the snow has gone through one or more cycles of thawing and refreezing, or when very wet.

1. Sanding
Sand the kick zone with #100 sandpaper (or T11 Combi-Cork).

2. Base Klister
KR20 or KB20 Green is normally chosen as the first layer as a base. Apply in a thin layer, just covering the sanding. For lower temperatures, high tear and wear conditions, or long distances always use KR20 or KB20.

3. Ironing Base Klister
The first layer of klister should be carefully warmed into the base with an iron to improve the contact between the klister and base.

Let the skis cool to room temperature.

4. Klister application
Select and apply the klister of the day. One layer normally is enough. The product is applied in a “fish-bone” like pattern, or as a thin string on each side of the groove.

5. Smoothing the Klister
Distribute evenly with the scraper, found in the package, or with the hand.
Swix Universal Recreation Klisters

Frozen corn (old) snow
Transformed moist fine grained snow
Wet corn snow

K21N Silver Universal Klister
+3°C to -5°C (37°F to 23°F).
For coarse to fine grained snow and changing conditions around freezing.
To be used on somewhat colder conditions than K22N VM Universal Klister.

K22N VM Universal Klister
+10°C to -3°C (50°F to 27°F).
For coarse grained to fine grained snow, with an ideal range somewhat above freezing.

How to get good glide and great kick -
Try Swix School at
www.swixschool.com
Always available and free of charge!
Swix KR Klister (Krystal Line)

A complete line of klisters, ranging from very cold and coarse snow to extreme wet conditions. Designed for top-level performance, but useful for recreational touring skiing as well.

**Frozen corn (old) snow**

**KR20 BASE KLISTER**
Green. -3°C to -25°C (27°F to -13°F).
High wear resistance and adhesion.
To be used as a first layer as a binder for other klisters or hard waxes in very abrasive conditions. Can also be used alone for icy conditions at very cold temperatures. As a first layer klister, it should be heated into the base.

**Frozen corn (old) snow**

**KR30 ICE KLISTER**
Blue. 0°C to -15°C (32°F to 5°F).
For frozen, icy tracks in cold conditions. Can also be used as a base klister for wet-snow klisters to improve wear.

**Transformed moist fine grained snow**

**KR50 FLEXI KLISTER**
Violet. +3°C to -4°C (37°F to 25°F).
Very adaptable, working on both sides of freezing. Ideally it is best when conditions are changeable and mixed fine grained snow.

**Wet corn snow**

**KR40 COARSE SNOW KLISTER**
Violet/blue. +2°C to -7°C (36°F to 19°F). A tough klister for old granular, coarse snow only. Great base klister with VR50 and VR45 on top when the snow is coarse at -2°C/-5°C (28°F/23°F).

**Wet corn snow**

**KR60 VARIO KLISTER**
Red. +5°C to 0°C (41°F to 32°F).
Created for medium wet snow. “Vario” is best on the warm side of freezing.

**Wet corn snow**

**KR70 AQUA KLISTER**
Red. +12°C to +2°C (52°F to 36°F).
Wet snow klister. Used when the snow has high water content such as slush, and the air temperature is well above freezing.
Cleaning of Skis

Cleaning is recommended after each ski trip.

1. Scraping
Remove as much wax as possible using a scraper (T87).

2. Final Cleaning
The remainder is taken away with Wax Remover and Fiberlene (T0150). If the wax is difficult to remove, use gray Fibertex (T265) saturated in Base Cleaner.

The Base Cleaner I63N has a coarse applicator that efficiently removes kister.

Swix Base Cleaner (I64)
The active ingredient in the cleaner is a low aromatic hydrocarbon with good solvent capacity.

Citrus Solvent Base Cleaner (I74)
500 ml Citrus Solvent is a 100% citrus-based product, which also is a strong solvent.

Klister Scrubber (T269)
Use together with Base Cleaner for efficiently removal of kister.

Fiberlene Cleaning Towel
40 m.

Base Cleaners and accessories for removal of hard waxes and klisters

Waxes and klisters consist of tough, rubbery, water-resistant, inert, and stable materials. This means that they are also difficult to remove from the ski base. Solvents are necessary for thorough base cleaning.

Swix Base Cleaner and Swix Citrus Solvent are both formulated to minimize health and fire hazards.

Traditional solvents like trichloroethylene or methylenechloride were frequently used as solvents for oils, fats and also waxes. These highly aromatic solvents, however, are considered health hazards and should be avoided. They are not found in the Swix wax removers.
Liquid Grip Line

The new Swix Liquid Grip Waxes inherit their qualities from the traditional V-series of waxes including the famous “V40 Blue Extra”. The three waxes in the Grip Line are the solution for dedicated skiers demanding a fast and clean product with reliable kick qualities.

The new Liquid Grip Line includes V40L Blue, V50L Violet and V60L Red, and are used for new and fine grained snow conditions. These liquid V-products come in convenient packaging.

V40L Blue Grip
-2°C to -15°C
(28°F to 5°F).
Liquid wax covering a wide range on the cold side in new and fine grained snow conditions.
70 ml/2.5 fl. oz.

V50L Violet Grip
0°C to -3°C
(32°F to 27°F).
Liquid wax covering the range on the cold side below freezing in new and fine grained snow conditions.
70 ml/2.5 fl. oz.

V60L Red Grip
0°C to +3°C
(32°F to 38°F).
Liquid wax covering the range on the warm side above freezing in new and fine grained snow conditions.
70 ml/2.5 fl. oz.

Liquid Glide Line

New formula! Easy application, dries quickly and time saving!

F6L Blue Glide
-4°C to -15°C
(25°F to 5°F).
Fluorinated liquid wax with wide range on the cold side. For all snow types.
80 ml/2.8 fl. oz.

F7L Violet Glide
+1°C to -6°C
(34°F to 22°F).
Fluorinated liquid wax with wide range around freezing. For all snow types.
80 ml/2.8 fl. oz.

F8L Red Glide
0°C to +10°C
(32°F to 50°F).
Fluorinated liquid wax for all wet snow conditions.
80 ml/2.8 fl. oz.