

swix®



PR0825E

NORDIC SKI PREPARATION
Waxing Guide for Skating
and Classic Skiing

swix®
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



Waxing Iron T74220



Base Cleaner I63N with
fibertex applicator



Plexi Scraper T823 for
removing glide wax



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



Fiberlene Cleaning
Towel T151



Groove Scraper T87



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



Ski straps R402



Wax Scraper T85



*Founder of Swix, Martin Matsbo (1911-2002)
testing kick wax in 1946.*

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 tubes 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.

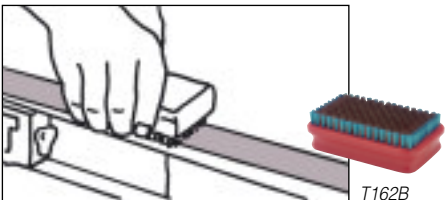
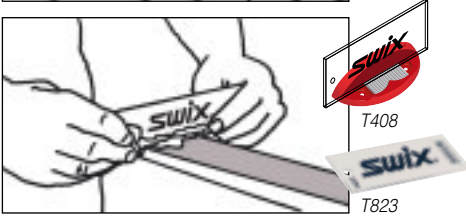
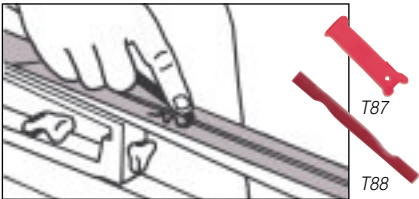
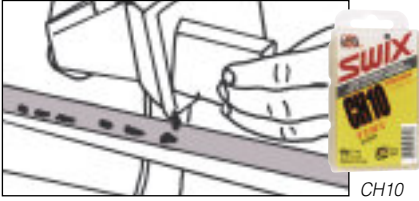
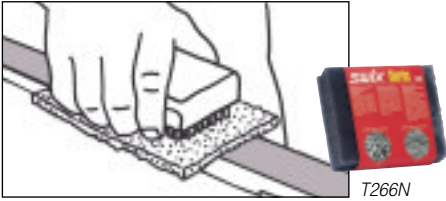
Since 1986 Swix has been located in Lillehammer, Norway where all wax production takes place. This is an ideal area for testing and developing new products having close access to cross country trails and alpine areas.

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 trated 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.

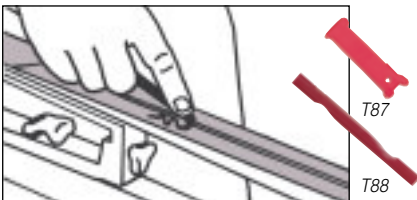


2. Hot wax application

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!

T74220



3. Ironing

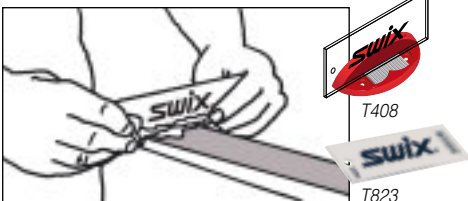
Go from tip to tail, constantly moving the iron to prevent over-heating the base. Let the skis cool for 5 to 10 minutes.

4. Groove scraping

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

T87

T88

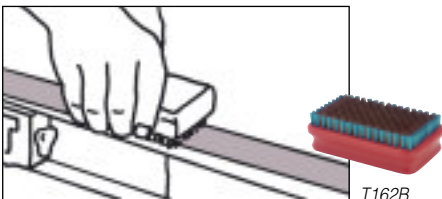


5. Base scraping

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

T408

T823



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.

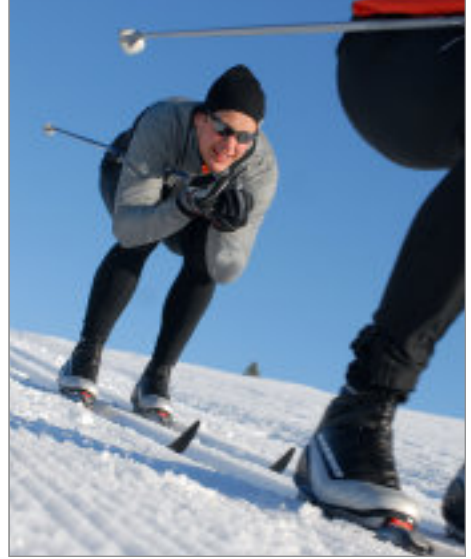
T162B

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).



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).



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.

Recommend iron setting: 120°C (250°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).



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).

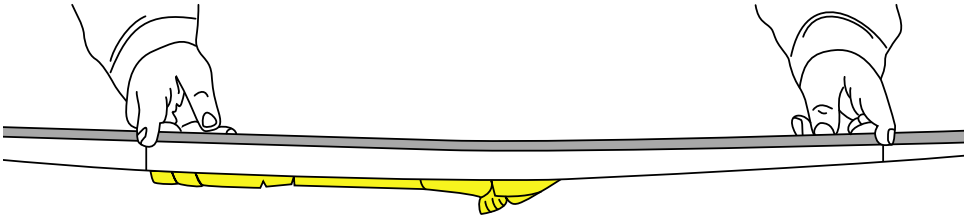


LF10 Yellow

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



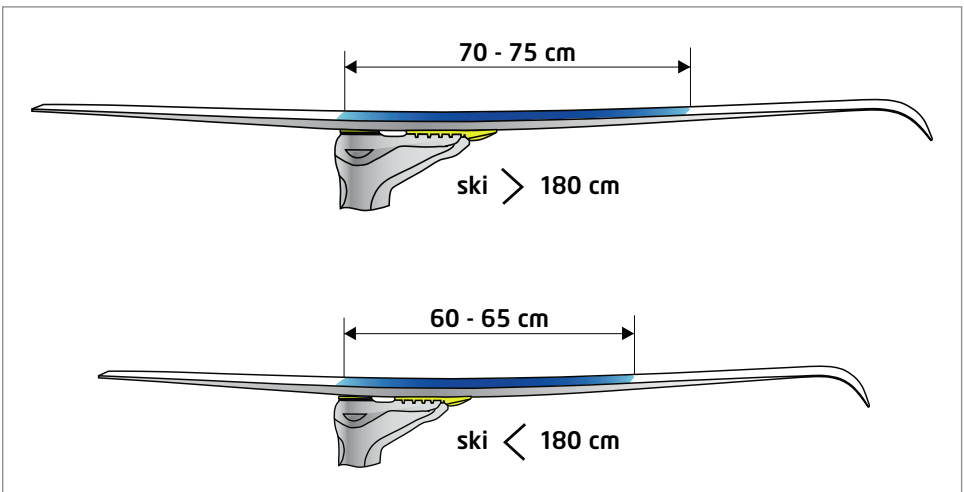
The stiffness of the skis is very important for obtaining the combination of good glide and good kick. Take care when selecting skis.

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.

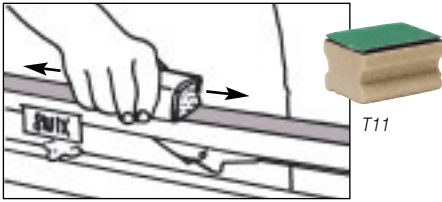
The waxing of the kick zone should take place after finishing the glide zones. The length of the kick zone should be in the range of 75 cm for both klister and hard wax. Generally the kick zone is measured from the heel of the binding and forward.

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)

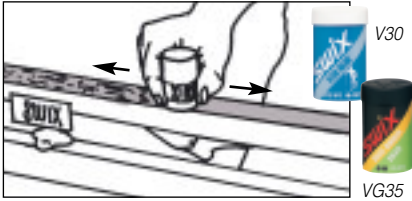


APPLICATION OF HARD WAXES



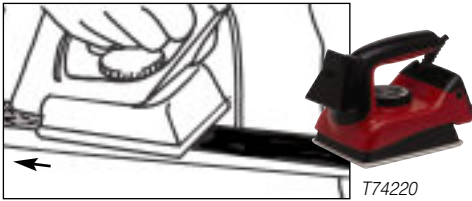
1. Sanding

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.



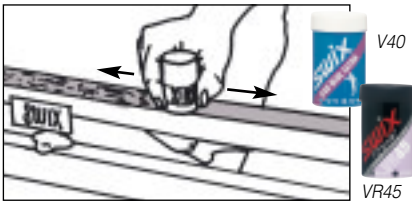
2. Base wax

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

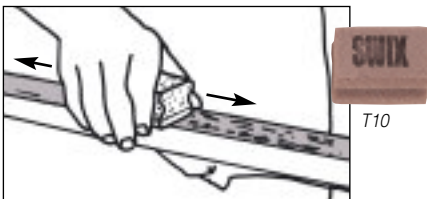
The first layer of wax should be ironed into the base. The heat will improve the bond between the wax and base giving longer wear. Iron setting should be 100°C (212°F).



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.



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)

V20 GREEN



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)

V30 BLUE



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)

V40 BLUE EXTRA



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)

V45 VIOLET SPECIAL



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)

V50 VIOLET



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)

V55 RED SPECIAL



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)

V60 RED/SILVER

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



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)

VR30 LIGHT BLUE

Designed for cold to extremely cold conditions.



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)

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
-2°C to -8°C (28°F to 18°F)



Old, transformed snow
-4°C to -12°C (25°F to 10°F)

VR40 BLUE

For normal, subfreezing temperatures.



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)

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
0°C to -2°C (32°F to 28°F)



Old, transformed snow
-2°C to -8°C (28°F to 18°F)

VR45 FLEXI

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



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)

VR60 SILVER

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

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.



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.



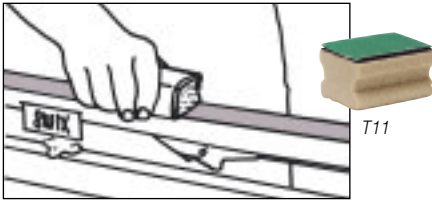
New fallen snow
+2°C to +5°C (36°F to 41°F)

VR75 KLISTERWAX SOFT

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



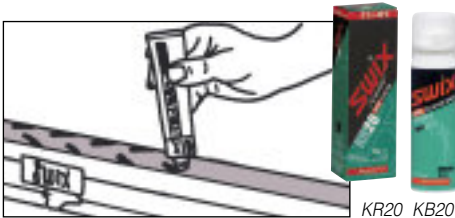
APPLICATION OF KLISTERS



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 Klisters

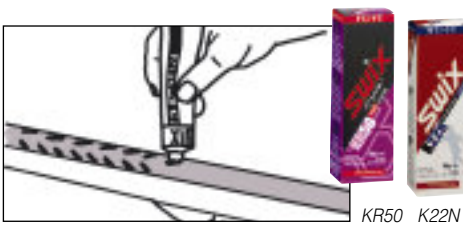
KR20 or KB20 Green is normally chosen as the first layer as a base. Apply in a thin layer, just covering the sanding. For lower temperatures, high tear and wear conditions, or long distances always use KR20 or KB20.



3. Ironing Base Klisters

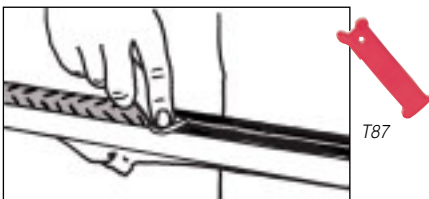
The first layer of klisters should be carefully warmed into the base with an iron to improve the contact between the klisters and base.

Let the skis cool to room temperature.



4. Klisters application

Select and apply the klisters 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 Klisters

Distribute evenly with the scraper, found in the package, or with the hand.

Swix Universal Recreation Klister





-  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.

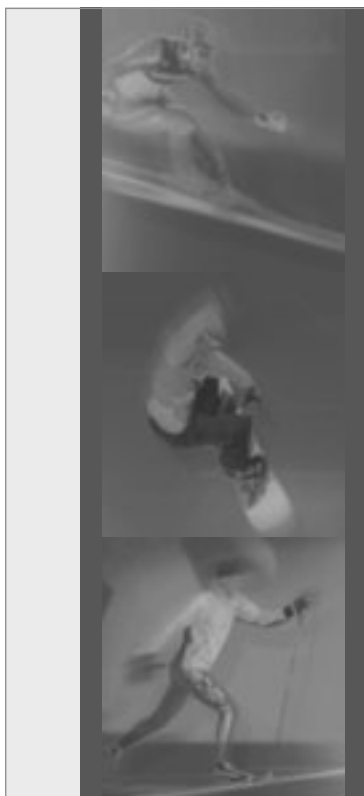


-  Frozen corn (old) snow
-  Wet corn snow

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.



SWIX[®]
SCHOOL

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.






 Frozen corn (old) snow
 Wet corn snow

KR40 COARSE SNOW KLISTER

Violet/blue. $+2^{\circ}\text{C}$ 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).





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

KR50 FLEXI KLISTER

Violet. $+3^{\circ}\text{C}$ 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.




 Transformed moist fine grained snow
 Wet corn snow

KR60 VARIO KLISTER

Red. $+5^{\circ}\text{C}$ to 0°C (41°F to 32°F). Created for medium wet snow. "Vario" is best on the warm side of freezing.



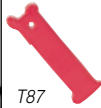
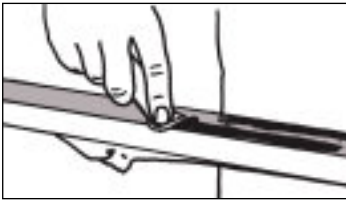
 Wet corn snow

KR70 AQUA KLISTER

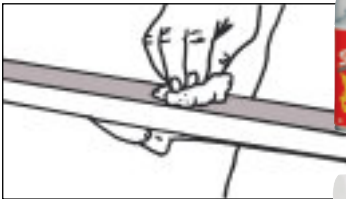
Red. $+12^{\circ}\text{C}$ to $+2^{\circ}\text{C}$ (52°F to 36°F). Wet snow klister. Used when the snow has high water content such as slush, and the air temperature is well above freezing.

Cleaning of Skis

Cleaning is recommended after each ski trip.



T87



I62 I63N

T151

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 klister.

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.



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 efficient removal of klister.



Fiberlene Cleaning Towel

40 m.

NEWS!



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.