



WAXING GUIDE FOR SKATING AND CLASSIC SKIING

SWIX[®]
SCHOOL



Photo: Vegard Breie

This manual is not directed towards World Cup racers, but rather to frequent skiers keen to keep in shape. Follow the guidelines found in this manual and we can promise better and more enjoyable skiing.

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

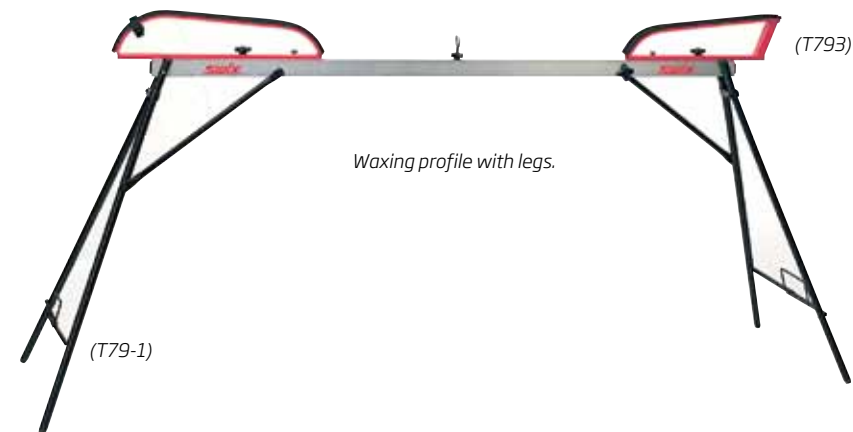


*Founder of Swix,
Martin Matsbo
(1911-2002)
testing kick wax in
1946.*

break-through 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.

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.

Useful accessories that will make waxing easier:



Waxing profile with legs.



Fibertex for removal of oxidation on new ski bases (T264).



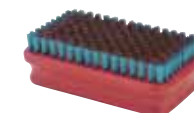
Waxing Iron (T74220).



Base Cleaner with fibertex applicator (I63N).



Plexi Scraper for removing glide wax (T823).



Bronze Brush for brushing the glider out of the base structure (T162).



Fiberlene Cleaning Towel (T151).



Wax Scraper (T86).



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

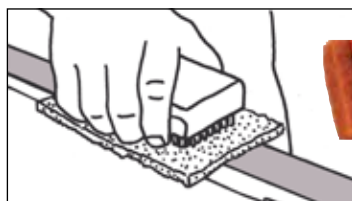


Ski straps (R402).

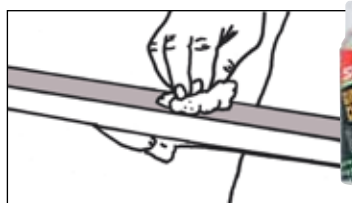


Pencil groove scraper (T88).

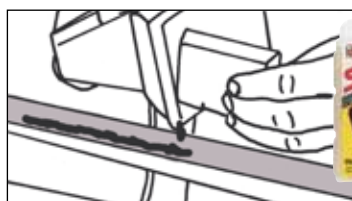
NEW SKATING SKIS/CLASSIC SKIS GLIDEZONES



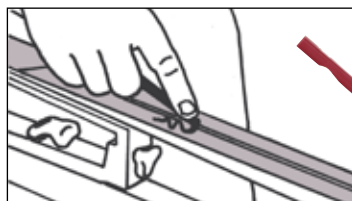
T264



I84



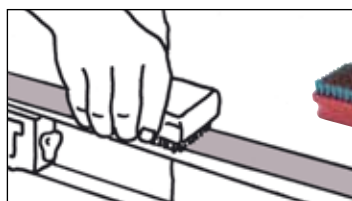
CH10



T88



T823



T162B

1. Base conditioning

The preparation of new skis starts with Fibertex treatment (T264), 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. Cleaning with the Glide Wax Cleaner (I84)

Brush lightly with a Bronze Brush (T162). Moisten a piece of Fiberlene with the cleaner and apply to the glide zone of the base. Rub forward and backward a few times with a Nylon Brush (T161B) and wipe off as much as possible with Fiberlene. Let the ski dry for 5-10 minutes. Brush firmly with the Bronze Brush (T162). The ski is now ready for application of glide wax.

3. Ironing wax

Iron in a soft wax such as CH10 or CH8 to prevent dry bases. Start at the tip moving the iron towards the tail three times. Use one continuous motion to avoid overheating. Wait 5 minutes, use the iron three more times without adding wax.

4. Groove scraping

Wait 15 minutes. Remove all wax out of the groove with the Groove Scraper (T88).

5. Base scraping

Scrape off wax with a sharp Plexi Scraper (T823). Do not press too hard.

6. Brushing

Use a Bronze Brush (T162) tip to tail 10-20 times. **Note: No brushing in the kick zone.**

7. Storage wax

Finally iron in CH8 for wet snow skis and CH7 for cold snow skis. Leave wax on as storage wax.

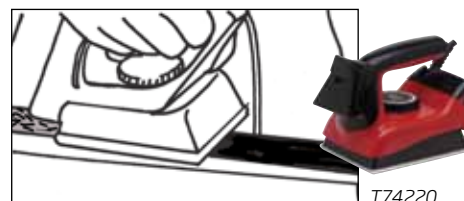
Skis having a new stone grind should be treated also as from step 1 to 7.

GLIDE WAX FOR THE DAY FOR SKATING SKIS/CLASSIC SKIS GLIDEZONES

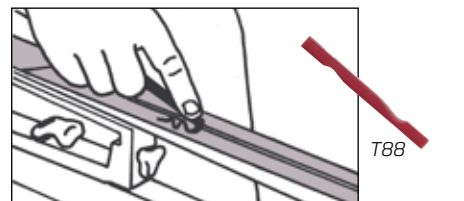
Three glide waxes will cover most snow conditions:

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.

LF waxes are fluorinated and give better glide when high humidity and in wet snow.



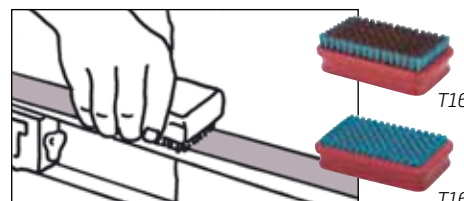
T74220



T88



T823



T162B

T160B

1. Base conditioning

Scrape storage wax away with Plexi Scraper (T823). Make 10 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.

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 (T88).

5. Base scraping

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

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.

7. Brushing

Polish with a fine Nylon Brush (T160B), 10 strokes, or use Fiberlene Cleaning Towel (T151).

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).



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: 125°C (255°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: 125°C (255°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.

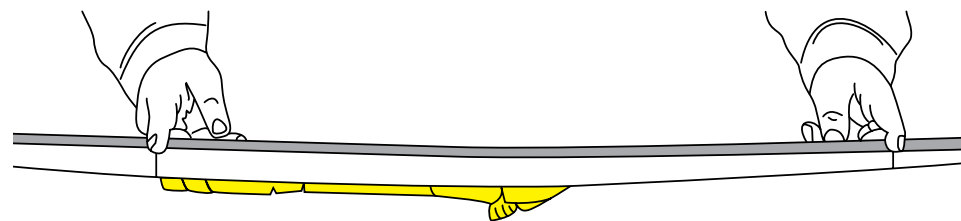
Recommended iron setting: 110°C (230°F).



Enjoy environmental skiing with Swix FUTURE CERA™ technology!

Swix Future Cera™ technology decreases the half-life time of the product from years to months! Swix Future Cera™ technology will be incorporated in the LF-line for the 2012-2013 season.

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.

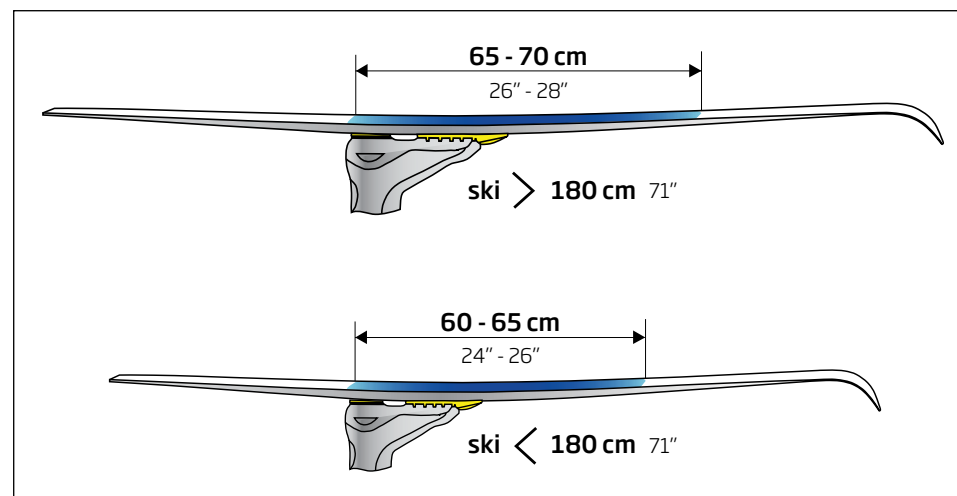
For optimal function of the kick waxes, accurate matching of ski stiffness to skier weight is necessary. At the moment of kick, having full weight on one ski, the ski should have sufficient contact with the snow. However, skis that are too soft will reduce the gliding properties and cause unnecessary 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 65-70 cm for both klister and hard wax. Generally the kick zone is measured from the heel of the binding and forward.

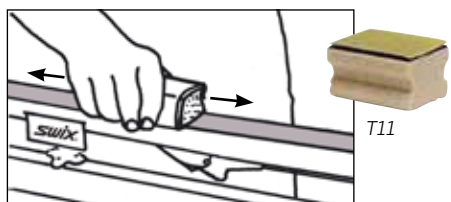
Don't be afraid to extend the kick zone forward if the skis are slipping. A longer kick zone has less influence on glide than what you might imagine, and having good kick will make the ski tour much more enjoyable.

Note: No glide wax in the kick zone!

KICK ZONE (KLISTER=HARD WAX)



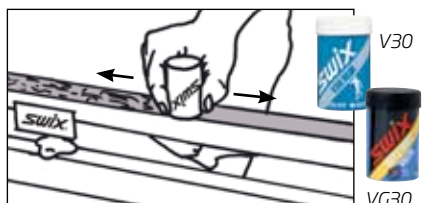
APPLICATION OF HARD WAXES



T11

1. Sanding

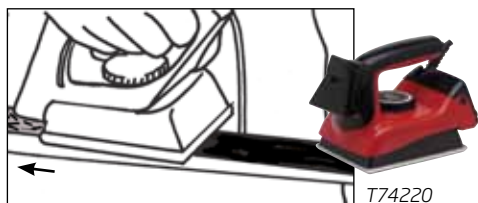
The kick zone should first be sanded with #100 grit sandpaper approx. 60 cm (about 2 feet). Sand the zone back and forth parallel to the length of the ski. The Swix Combi Waxing Cork (T11) with sandpaper on one side is an ideal tool.



VG30

2. Base wax

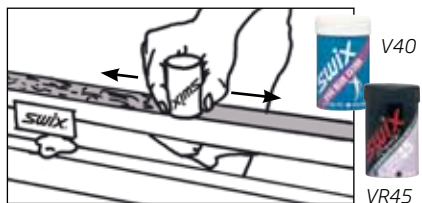
At temperatures below 0°C (32°F) a relatively hard wax, such as V30 Blue, is recommended as a base wax. Base Binder VG30 is applied as the first layer when the snow becomes coarser.



T74220

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).

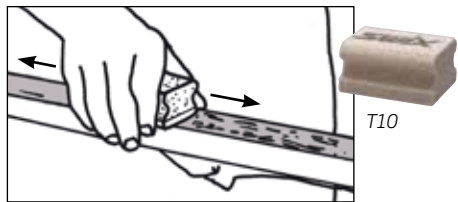


VR45

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.



T10

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

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).



-  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**

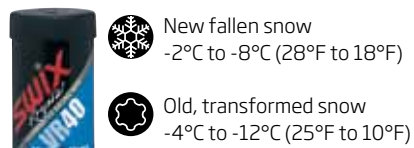
The VR waxes are fluorinated and formulated for top racing, but also have proved interesting for recreational and sport skiers because of their excellent properties, particularly around 0°C (32°F).

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



VR30 LIGHT BLUE

Designed for cold to extremely cold conditions.



VR40 BLUE

For normal, subfreezing temperatures.



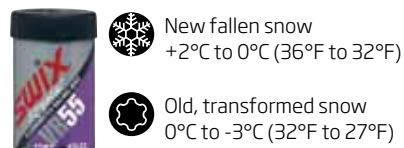
VR45 FLEXI

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



VR50 VIOLET

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



VR55 SILVER/VIOLET

For moist snow around freezing and for older, more coarse snow just below freezing. Perfect balance between kick and glide.

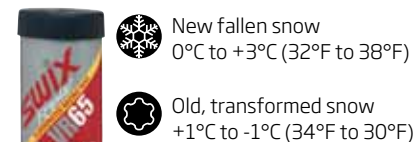


VR60 SILVER

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

fallen 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.



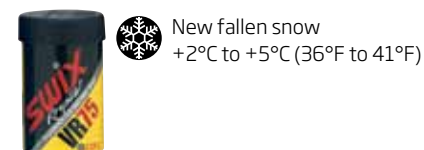
VR65 RED/YELLOW/SILVER

For moist snow. Excellent wax on fresh slightly wet to moist snow.



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.



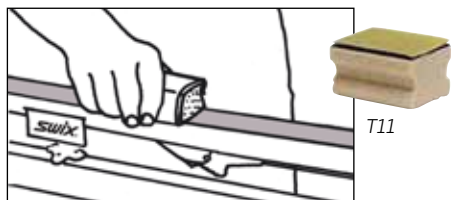
VR75 KLISTERWAX SOFT

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



APPLICATION OF KLISTER

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



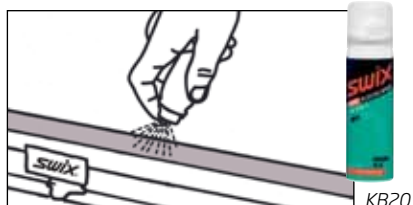
T11

1. Sanding

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

2. Base Klister

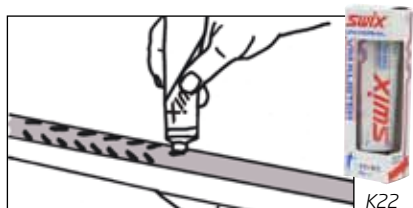
KB20 Green is normally chosen as the first layer as a base. Apply in a thin layer, just covering the sanding. For lower temperatures, high tear and wear conditions, or long distances always use KB20.



KB20

3. Klister application

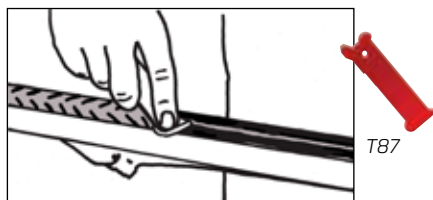
Select and apply the klister of the day. One layer normally is enough. The product is applied in a "fish-bone" like pattern, or as a thin string on each side of the groove.



K22

4. Smoothing the Klister




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



T87

SWIX UNIVERSAL KLISTER





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

K21S Silver Universal Klister

+3°C to -5°C (37°F to 23°F).
For coarse to fine grained snow and changing conditions around freezing.



-  Wet corn snow
-  Frozen corn (old) snow

K22 VM Universal Klister

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

SPRAY ON BASE KLISTER



KB20 GREEN BASE KLISTER SPRAY

First klister layer to be applied. To be used with regular klister on top. For Racing, Sport and Recreation.

Spray nozzle for upside down application that gives better control and less waste. The spray nozzle makes it easy to apply a thin layer of base klister with only one stroke.



NEW KX KLISTER LINE

This is a complete new klister line based upon new formulas that has a logical build up going from hard to soft, from cold corn snow to extreme wet corn snow. The higher the number, the softer the wax.

- Better kick and glide!
- More fun less mess.
- New packaging.
- Smaller opening on tubes for better control when applying.



KB20 GREEN BASE KLISTER SPRAY

First klister layer to be applied.
To be used with regular klister on top.



Wet corn snow



Frozen corn snow

KX45 VIOLET KLISTER

-2°C to +4°C (28°F to 39°F).
All round klister. For wet coarse snow as well as frozen corn snow.
Scraper included.



Frozen corn snow

KX30 ICE KLISTER

Blue. 0°C to -12°C (32°F to 10°F).
For frozen, icy tracks and cold conditions. Can be used as base klister on wet snow.
Scraper included.



Wet corn snow

KX65 RED KLISTER

+1°C to +5°C (34°F to 41°F).
For wet and moist coarse corn snow.
Scraper included.



Wet corn snow



Frozen corn snow

KX35 VIOLET SPECIAL KLISTER

+1°C to -4°C (32°F to 25°F).
Excellent klister on transformed cold coarse corn snow starting to get wet. Midlayer klister applied on Base klister (KX20 or KB20) to avoid that the top layer klister slides back into the glide zone.
Scraper included.



Very wet corn snow

KX75 RED EXTRA WET KLISTER

+2°C to +15°C (36°F to 59°F).
Wet snow klister. Used when the snow has a high water content such as slush, and the air temperature is well above freezing. Late spring klister.
Scraper included.

CLEANING OF SKIS

Cleaning is recommended after each ski trip.

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.



Glide Wax Cleaner (I84-150)

Cleaner for fluoro glide wax and CH wax. Solves fluoro components, improves glide and conditions the base. To be used in glide wax zone and on skating skis. 150 ml spray.



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 Scrub (T269)

Use together with Base Cleaner for efficiently removal of klister.



Fiberlene Cleaning Towel

40 m.

CLEANING OF THE KICK SECTION

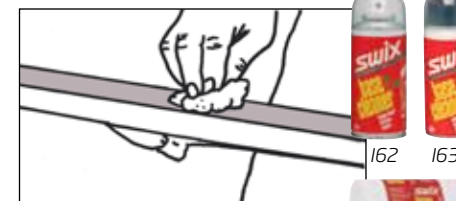
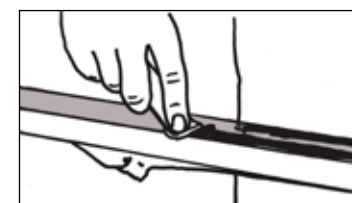
1. Scraping

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

2. Final Cleaning

The remainder is taken away with base cleaner and Fiberlene (T0150). If the wax is difficult to remove, use a klister scrubber (T269) saturated in base cleaner.

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



T151

After the skis are cleaned, the glide sections should be ironed with either BP88, CH8 or LF8 to avoid oxidation in the base. Remember never use glide wax in the kick section.

Summer storage of skis

Skating skis: Clean the skis. Cold snow skis are to be ironed in with a LF7/CH7 wax, wet snow skis with a LF10/CH10.

Classic skis: Clean the skis. Cold snow skis are to be ironed in glide sections with a LF7/CH7 wax, wet snow skis with a LF10/CH10.

Grip section should not have any wax at all.

EASY APPLICATION AND DRIES QUICKLY - TIME SAVING!

LIQUID GRIP LINE

The 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 Liquid Grip Line includes V40L Blue, V50L Violet and V60L Red, and are used for new and fine grained snow conditions. Upside down applicator for better control!



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

Swix Liquid Fluoro Glide Wax takes elements from the most successful wax line in Swix history, Cera Nova, and combines it with the Swix "Quick and

Easy" concept. Together this gives a streamlined solution for the skier who cares for good glide with the least possible preparation time.



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.

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