wax manual

ALPINE

SNOWBORD

NORDIC

ENGLISH

Tips for the professional
care of skis and snowboards

TOKO®

Table of contents

Toko products belong to winter just as much as snow does to white pistes and cross-country tracks. For many top athletes they are a guarantee for success when competing – more than 80% of all top teams don't work with us for nothing.

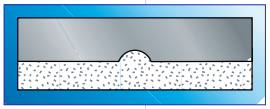
Important:
Why you should wax!

Waxing is not simply something for professionals. Even beginners can achieve a better, safer and faster performance with well waxed and cared for material. Moreover, they'll have much more fun with their sporting activities.

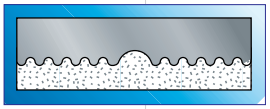
As a result of friction produced by the ski gliding on snow, snow crystals are partially melted at the points of contact. Microscopically small droplets of water produce a lubricating effect between the ski and snow. If you take into account the fact that, when skiing and snowboarding, the means of lubrication are first created by friction, the significance of the amount of friction becomes evident.

In these terms, the correct wax mixture has, in many ways, a huge influence on friction interrelation between ski and snow. Firstly, with the hardness of the wax mixture, the hardness of the base surface is matched to the hardness of the snow. Secondly, with special mixtures of paraffin and fluorine, suction created by water between the ski base and the snow can be greatly reduced.

Cold, aggressive snow

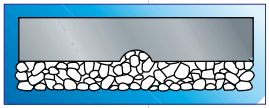


Fine structure, small snow crystals = low friction

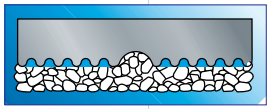


Coarse structure, small snow crystals = increased friction

Coarse grained snow



Fine structure, large snow crystals = increased friction



Coarse structure, large snow crystals = reduced friction

Base structures

As the base of your ski or snowboard glides over the snow, small droplets of water form at the points of contact between base and snow. If the area of contact is too large, friction increases - this can lead to the creation of a large film of water, which in turn can produce a strong vacuum effect.

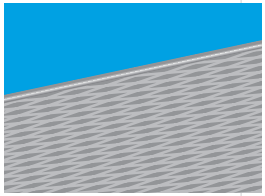
Of course, with a small area of contact and little friction, it can be more difficult to achieve the desired lubricating effect.

Base structures can provide the solution in these situations. In order to create an optimal area of contact between ski and snow, a structure is ground into the surface of the base. In racing sports, these structures are tailored to the texture of the surface of the snow on a quite individual basis - whereby they guarantee an optimally gliding ski.

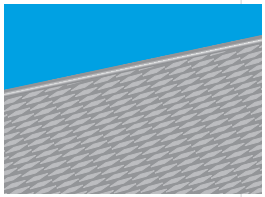
The selection criteria: with low temperatures and fine snow crystals a fine structure is needed, so as to maximize the contact area and friction strengths. In warmer temperatures, coarsely grained snow and wet snow demand coarsely grained structures in order to reduce the contact area, thus hindering the unwanted, braking vacuum effect.

Specialist sports shops can grind almost any structure desired into bases. Moreover, they use special stone grinding machines, which manufacture the desired structures with high-quality diamonds.

Linear structure



Crossed structure



Slanting crossed structure

Structurite Nordic

With the manual Structurite Nordic appliance, cross-country skiers have the possibility of structuring their bases individually.

A brief lesson on Snow from Toko

Snow is a true »gift from heaven« – it comes in an unending variety of types. It is also often known as »hot material«, because snow, in comparison to other materials, is very close to its melting point (even when at minus 20 °C). Thus, snow reacts in a very sensitive manner to outside influences such as wind, sun, cloud, etc., it is also subject to constant change.

In order that skis glide in the best possible manner, the wax mixture must be perfectly tailored to the prevailing snow conditions. The most important types of snow and their characteristics:

New snow

In low temperatures, the points and edges of new snow exert huge friction on the surface of the base. In temperatures around 0 degrees the crystals quickly lose shape, then these half melted snow crystals lead to the creation of a large contact area between ski and snow, thereby increasing braking friction.

Old snow

Around 48 hours after a snowfall we talk about old snow – but it is important to distinguish between large and small crystals. Small crystals display larger thickness and, therefore, a larger contact area with greater friction. In general, old snow crystals are rounder than new snow crystals and thus produce less friction.

Artificial snow

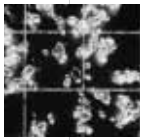
In contrast to natural snow, the crystals of artificial snow freeze from the outside in. Often, in the case of fresh snow crystals, not all of the water is frozen. However, if it freezes completely, crystals break apart from one another, which leads to the formation of sharp edges. If artificial snow is prepared too early, the unfrozen water flows to the surface and creates a sheet of ice.

As the crystals are some 10 times smaller than natural snow crystals, a great depth of snow can be created on the piste in a short matter of time. However, great depth also means a large contact area - and in combination with sharp types of crystal – a large amount of friction.

Wet snow (snow humidity)

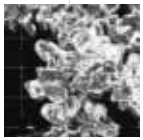
If snow crystals are warmed to 0 degrees they begin to melt. The water thus formed – but also water from precipitation - creates a larger contact area between ski and snow and consequently increases friction (vacuum effect).

New snow



Old snow

Artificial snow



Wet snow

Toko thanks the experts

We would like to thank Hansueli Rhyner from the Eidgenössisches Institut für Schnee- und Lawinenforschung (Swiss Institute for Snow and Avalanche Research), Davos, for his expert support.

Toko works in close cooperation with leading experts from all over the world on snow and avalanche research. In the past few years various projects have scientifically dealt with the theme of »gliding on snow«; the findings have been implemented in innovative Toko products.

Tests for Alpine racing

It is the middle of the night in Kaunertal. At five in the morning, only the Toko testing team – Hansjürgen Hüppi and Heinz Kolly – is making its way to carry out tests on the glacier at an altitude of 3000 m. The anemometer lies still, the sun is still hiding behind the mountains, the snow temperature is -15 °C: ideal conditions for a test day.

Today, five pairs of skis are being tested from each brand. In order to obtain true average values for individual skis, one line will be used 3–4 times in all. In addition to that, the weather station communicates all relevant data and the data logger provides information on snow temperature, atmospheric temperature and humidity, wind direction, wind speed and radiation. Incidentally, Toko is the only company in the world that carries out testing using such a modern system.

After four hours of intensive tests, it's back to the hotel, where, after a short break, work continues. The afternoon is dedicated to analysing the test runs. Using the test times and the correct weather value classifications, new wax mixtures are devised. Then it's waxing and more waxing. Hansjürgen writes the test report, carries out analyses and creates new mixtures. Following dinner, the prepared skis are loaded up, ready for the beginning of yet another test day for the crew.

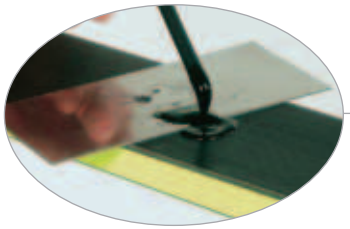
Before they appear at the starting lines of Olympic, World Championship and World Cup races, all Toko products have to undergo these endurance tests. This is how we achieve the basis for success for top athletes. In this line of work, no goal is too distant, no mountain too high and no piste too steep.

Repair Candle

You can easily repair minor base damage yourself after skiing/snowboarding using the two following techniques.

1. Light the candle

Hold the lit repair candle horizontally and let it drip onto a metal stripping blade.



2. Fill damaged spots

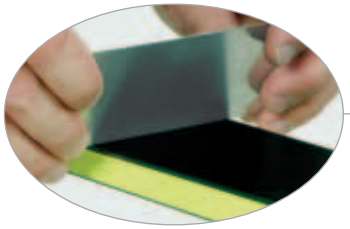
Drip the liquid repair material onto the damaged spot and allow it to cool completely.

3. Scrape off excess material

Scrape off excess material in layers with the radial file.

Tip:

Wrap sticky tape around the file at the support points to avoid scratching the base.

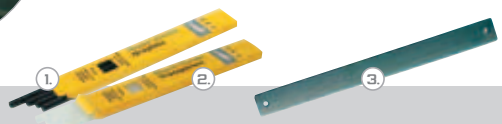


4. Scrape off any remaining unevenness with the steel stripping blade.

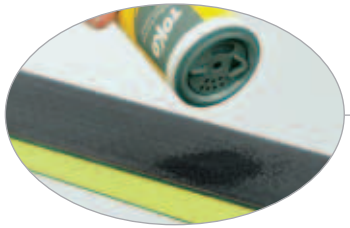
5. Brush out the base with a copper brush.

Tip:

If reworking with abrasive paper, the base can be protected with Toko Base Tex.

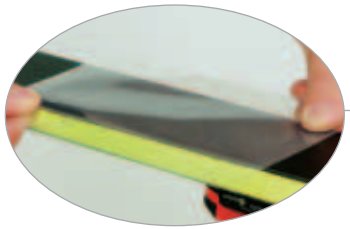


Repair Powder



1. Sprinkle on powder

Sprinkle the repair powder on the damaged spot.



2. Position the foil

Lay the foil over the powder.

3. Iron in

Set the wax iron to 140 °C and place it on the repair foil. Move the iron gently backwards and forwards over the repair spot for about 10–15 seconds.

After the material has cooled down completely, remove the foil.

Scrape off and brush out as described on previous page.

1. Repair Candle graphite
2. Repair Candle transparent
3. Base File Radial
4. Steel Scraper Blade
5. Copper Brush
6. Repair Powder transparent
7. Repair Powder graphite
8. WaxIron 1200/600W
9. Toko Base Tex

»Express edge tuning«

After a day on your skis/snowboard, the edges can simply be filed again.

1. Remove ridges

Use the universal grinding stone to smooth over protruding damaged edges on the base side.

2. Grind the side edges

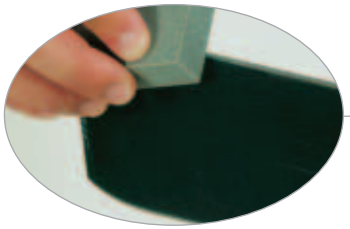
Pre-file the damaged side edges with the grinding stone likewise.

3. File with the Edge Control Pocket

Skis and boards can be very easily filed using the Edge Control Pocket.

3. File with the Precision File Guide

Filing with the File Guide is very easy. The hands are well protected by the grip. Any edge angle can be set.



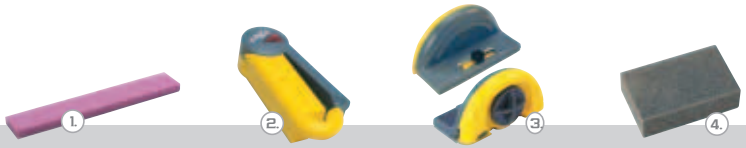
4. Break the edges

The blades are easily rounded off at both the tip and end of the ski/snowboard.

Tip:

With race carving skis and fun carving skis, do not detune the edges too much. With these skis, the aim is to avoid lateral sliding, or »drifting«.

1. Universal Edge Grinder
2. Edge Control Pocket 1° F.E.T.S.
3. Precision File Guide
4. Edge Grinding Rubber



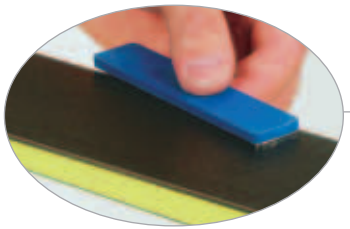
»Professional« base edge and side edge

If the running surface of the ski/snowboard is too concave (hollow) or too convex (rounded, it is almost impossible to use the ski/snowboard. In such cases it is worth taking the ski/snowboard to your ski shop, who can grind the surface for you professionally.

Today's slopes are often extremely hard and icy (artificial snow slopes), which is why edge preparation is gaining increasing significance (carving skis, snowboards).

The following procedure applies to daily manual preparation:

Base edge



1. Pre-file with the diamond file

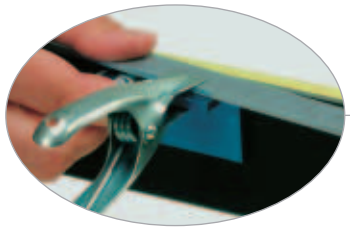
Remove ridges (caused by stones) with the diamond file (blue).

2. Check the base with the straight edge

Use the straight edge to check the evenness of the base and the edge offset.

3. Use the Base File Control for hanging edge filing

If the edges of the ski are not filed sufficiently on the base side degree (ski turns badly or is heavy to turn), the Base File Control is used to file the hanging edge to 0.5° or 1.0°. Use the Prisma straight edge to check the angle.



Side edges

1. File like the pros

The professionals use an edge angle, a file and a clamp file for filing. The 87° edge angle (blue) is the most frequently used in all disciplines. 88° and 89° edge angles are used in the child and youth area.

Tip:

It is easy to check the result with the edge angle and straight edge. The current angle of the edges is also easy to ascertain.

1. File with the Toko Ergo Multi Guide

Edges can easily be filed using the Toko Ergo Multi Guide. Thanks to the use of ball-mounted guidance rollers, the Toko Ergo Multi Guide is a precise and base-friendly tool. All Toko files and diamond tools can be fitted to the Toko Ergo Multi Guide.

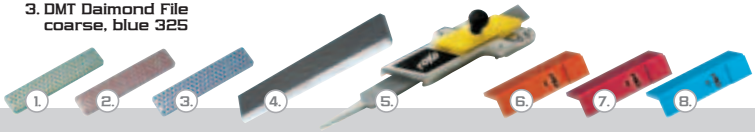
2. Remove ridges

Ridges develop during filing. These can be removed using the red or green diamond file. The diamond files are easier to pull across the base when they have been dipped in water (friction reduction).

3. Planing the sidewalls

If the file rubs against the sidewall, we remove sidewall material with the sidewall planer.

1. DMT Daimond File extra fine, green, grain 1200
2. DMT Daimond File fine, red, grain 600
3. DMT Daimond File coarse, blue 325
4. Prisma Straight Edge
5. Base File Control 0.5° Base File Control 1.0°
6. Edge Angle Pro 89°
7. Edge Angle Pro 88°
8. Edge Angle Pro 87°



9. Edge Angle Pro Clamp
10. Sidewall Planner Pro
11. Spare Knife, round Sidewall Planner Pro
12. Edge Grinding Rubber
13. World Cup File Chrome M 200 mm
14. World Cup File Chrome M 120 mm
15. World Cup File Chrome S
16. Toko Ergo Multi Guide

After repairing the base, after filing and before waxing, the base needs to be cleaned. Dirty residue and filing particles that have been pressed into the base must be removed.

The following techniques are suitable for this process:

Wax Remover

1. Spray on Wax Remover

The wax remover is sprayed on or applied using Base Tex.

2. Rub off with Base Tex

Leave the wax remover on for a short period of time and then rub it off thoroughly with the cleaning cloth.

Tip:

After using the wax remover, let the base air for about 15 minutes. It is then ready to be waxed.

1. Waxremover HC3
2. Toko Base Tex
3. All-in-one Wax
4. System-3 yellow, 0 – -4 °C
5. System-3 yellow/red, Set

Hot waxing (professional method)

1. Iron in soft wax

Choose a soft wax to iron on (System-3 yellow or All-in-One). Drip on wax and iron in.

2. Scrape off the wax while it is still warm

While the wax is still warm, scrape it off using the Plexi stripping blade.

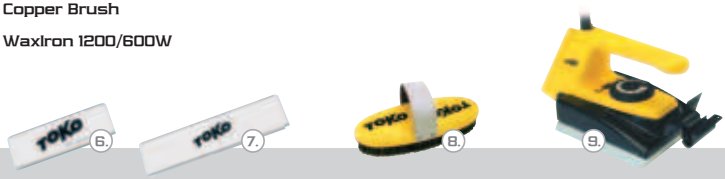
Tip:

Repeat the process in the case of excessive dirt.

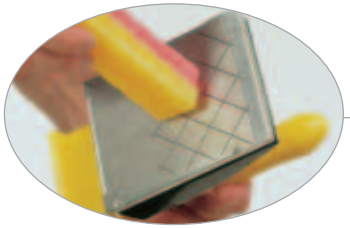
3. Brush out with copper brush

After waxing, the base needs to be brushed out thoroughly in the running direction using the copper brush.

6. Plexi Blade 3 mm
7. Plexi Blade for snowboards 4 mm
8. Copper Brush
9. Waxiron 1200/600W



Applying hot wax



1. Melt wax on the plate of the iron

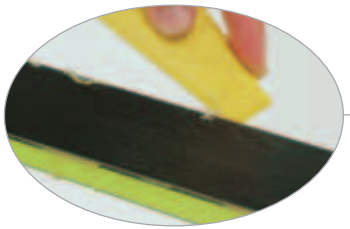
Drip wax onto the base. Ensure that wax is applied evenly.

Tip:

For mixtures, simply hold the wax sticks together and possibly tie an elastic band around them.

2. Iron in the wax

Push or pull the iron over the gliding surface. If the iron does not glide smoothly, drip on a little more wax.



3. Uncover side edges

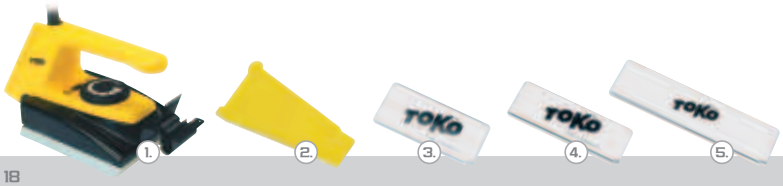
After allowing a short period of time for cooling, scrape the edges (the professional technique).

4. Scrape off wax

Use the Plexi blade to scrape off the wax from the base in the running direction after about an hour.

Tip:

The longer you leave the wax to cool and, therefore, harden, the faster the skis/boards will be.



5. Sharpening the Plexi blade

Pull the Plexi blade over the blade sharpener, which is suitable for various blade widths.

6. Brush out the base structure

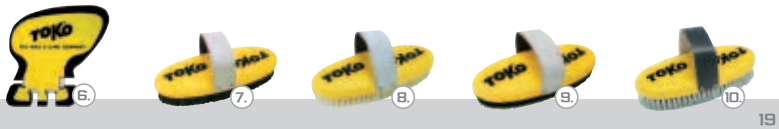
Using the copper brush, brush out the base structure in the running direction. Afterwards, for cold snow conditions (harder waxes), use the nylon brush to polish the base. Use the horsehair brush for the finish.

7. Steel Wire

Tip:

The professional service technician uses the Toko Steel Wire to brush out the ski especially for speed disciplines. The structure is thus perfectly freed-up – these skis have optimal "pull" at high speeds.

1. WaxIron 1200/600W
2. Multi-purpose Scraper
3. Plexi Blade 3 mm
4. Plexi Blade 5 mm
5. Plexi Blade for snowboards 4 mm
6. Scraper Sharpener
7. Copper Brush
8. Nylon Brush
9. Horsehair Brush
10. Steel Wire



Adapted to the corresponding temperature range, Dibloc High Fluoro guarantees a professionally prepared base for high-performance use in races. Ideal as a base for JetStream or Toko HelX.

1. Dibloc High Fluoro yellow, 0 °C/-4 °C
2. Dibloc High Fluoro red, -4 °C/-10 °C
3. Dibloc High Fluoro blue, -10 °C/-30 °C
4. Dibloc High Fluoro grey, Molybdenum -4 °C/-10 °C

Highly fluorinated hot wax system for competition use

1. Dibloc Low Fluoro yellow, 0 °C/-4 °C
2. Dibloc Low Fluoro red, -4 °C/-10 °C
3. Dibloc Low Fluoro blue, -10 °C/-30 °C
4. Dibloc Low Fluoro grey, Molybdenum -4 °C/-10 °C

Lightly fluorinated hot wax system for competition and training use

Dibloc High Fluoro — Snow temperatures

	0 → -3°C 32 → 27°F	-3 → -8°C 27 → 18°F	-8 → -12°C 18 → 10°F	-12 → -30°C 10 → 22°F
	yellow / Molybdenum	red	red / blue	blue
	yellow / red	red	red	blue
	yellow / Molybdenum	red / Molybdenum	Molybdenum / red	blue

Dibloc Low Fluoro — Snow temperatures

	0 → -3°C 32 → 27°F	-3 → -8°C 27 → 18°F	-8 → -12°C 18 → 10°F	-12 → -30°C 10 → 22°F
	yellow / Molybdenum	red	red / blue	blue
	yellow / red	red	red	blue
	yellow / Molybdenum	red / Molybdenum	Molybdenum / red	blue

System-3 — Snow temperatures

	0 → -4°C 32 → 25°F	-4 → -10°C 25 → 14°F	-10 → -30°C 14 → 22°F
	yellow / red	red	blue
	yellow / red	red	blue
	yellow	red	red / blue

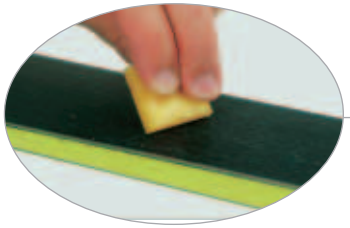
yellow red blue Molybdenum

These high-quality hydrocarbon waxes guarantee excellent gliding and easier turning for skis and snowboards.

1. System-3, yellow, 0 °C/-4 °C
2. System-3, red, -4 °C/-10 °C
3. System-3, yellow/red, Set
4. System-3, blue -10 °C/-30 °C

Applying JetStream

JetStream Bloc

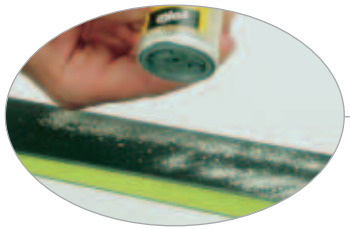


1. **Rub on JetStream**
   Rub JetStream onto the prepared ski with even pressure.

2. **Polish with the Thermo Pad**
   Use the Thermo Pad to polish the JetStream onto the base and into the base structure.

Tip:
A high degree of frictional heat generates better adhesion.

JetStream Powder



1. **Sprinkle on JetStream Powder**
   Sprinkle JetStream Powder evenly onto the base.

2. **Cork**
   Use the wax cork to cork the powder (the more frictional heat that is produced, the better JetStream adheres to the base).

3. **Brush out with the polishing brush**
   The powder should be lightly brushed out with the polishing brush.

4. **Polish with the Thermo Pad**
   At the end, the »JetStream dust« should again be thoroughly polished in using the Thermo Pad.

1. JetStream New Snow Race Bloc
2. Jet Stream Old & Artificial Snow Race Bloc
3. Thermo Pad
4. Polishing Brush
5. JetStream, New Snow Race Powder
6. JetStream Old & Artifical Snow Race Powder
7. Wax Cork

X-Cold Powder

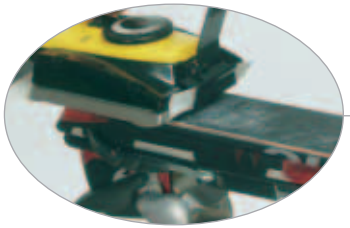
X-Cold Powder is our hardest wax, in powder form for easier application.

X-Cold is often used on the edge area in order to prevent the base from becoming burned from high friction.

Sprinkle X-Cold Powder onto the wax coating in the edge area.

Using a Plexi stripping blade, scrape the powder to the inner and outer edges at the binding area.

Or sprinkle over the whole surface.



Having briefly dabbed down the wax with a soft cloth to obtain an even layer, use the Tex supplied to iron it in.

1. X-Cold Powder
2. WaxIron 1200/600W

Applying Toko HelX

Wherever fractions of a second play a decisive role in racing, Toko HelX can be found at the starting line. To ensure optimal performance we recommend a base treatment with Toko Dibloc High Fluoro.

1. Pre-polishing

Pre-polish the base using the yellow side of the Dual Pad.

2. Spray on

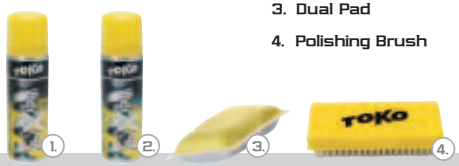
from a distance of around 10 cm spray Toko HelX (Warm or Cold) in a thin, even coating then leave to dry completely at room temperature for at least 3 mins.

3. Polish

After drying, polish the base well using the white side of the Dual Pad.

The Toko Polishing Brush is often used to lightly brush out the base for an extra polish at the starting line.

1. Toko HelX warm
2. Toko HelX cold
3. Dual Pad
4. Polishing Brush



Liquid waxes

Toko is one of the world's leading producers of liquid waxes. Fast, clean, reliable and great performance. It is not only the professional but also the amateur sports enthusiast who can benefit from this.

1. **Spray on**

   Simply spray on NanoTec HF2 warm or cold and leave to dry.

1. **Apply**

   Apply Express Line evenly using the sponge applicator and then leave to dry.

2. **Polish**

   After the base has dried, polish well with Dual Pad or Thermo Pad.

1. Nano Tec HF2 warm
2. Nano Tec HF2 cold
3. Express Mini
4. Express Pocket
5. Express Maxi

Rub-on waxes

1. **Rubbing on and polishing**

   Rub-on waxes can be applied quite easily. After rubbing on, polish with the Toko Thermo Pad.

Paste waxes

1. **Applying and polishing**

   Paste waxes are a popular type of wax that can be carried in a daypack or in a jacket. They are easily applied and, after a short drying time, should be polished.

6. Dibloc High Fluoro Rub-on-Set
7. Express Blocx Rub-on Wax
8. Express TF90 Universal Paste Wax
9. Dibloc High Fluoro Paste Wax

Toko service: a guarantee for success.

In the Nordic World Cup, increasing emphasis is being laid on high-tech methods and, as a result, the competition is becoming even more professional. Today it is only hundredths of a second that stand between victory and defeat. As a result, the expense for Toko racing services is also increasing. Steffen Hoos and Thorsten Walter are responsible for tests, service and looking after international pros.

In all tests, various factors are observed, such as snow and atmospheric temperature and atmospheric humidity, wind or radiation. The basis for this is the revolutionary Toko testing programme. A specially developed weather station also delivers all the relevant weather information, so that test runs can be reliably analysed under the same conditions. The person responsible for this area is our R&D colleague, Hansjürgen Hüppi.

For racing team technicians, Steffen and Thorsten, the days already start very early. In the morning 8–16 pairs of test skis are prepared with various paraffin, powder and liquid waxes. The skis are passed through the photoelectric barrier and subjected to test runs numerous times throughout the day. After this, the test reports go to the teams to help them choose the best possible wax mixture. The test results, as well as feedback from the teams, will be implemented in product improvements and innovations. It is this optimum cooperation with top teams that enables us to be so successful with our Toko products time and time again.

We will intensify this cooperation in the future. Indeed, we want all of our World Cup experience to profit. Top products for top athletes: that is Toko's promise and the target.

Base repair with Toko Repair Powder & Repair Candle

With a little skill, you can repair small scratches, damage caused by stones or at home.

Repair Candle

1. Light the candle

Light the Repair Candle and let it drip onto a metal blade until the material is no longer smoking and the flame is burning blue.

2. Drip on

Drip the liquid matter onto the damaged area and allow to cool.

3. Scrape off

Scrape off excess repair material in layers with the steel scraper blade.

4. Brush out

Thoroughly brush out the whole base using the copper brush.

Repair Powder

1. Apply

After cleaning the base, apply the required amount of powder (transparent or black) to the damaged area.

2. Iron in

Set the wax iron to 140 °C and press it onto the repair foil. Move the iron gently backwards and forwards over the repair spot for around 15–20 seconds.

After the material has cooled down completely, remove the foil.

Scrape off and brush out as described on previous page.

1. Repair Powder graphite
2. Repair Powder transparent
3. Repair Candle graphite
4. Repair Candle transparent
5. Steel Scraper Blade
6. Copper Brush
7. WaxIron 1200/600W
8. WaxMouse 800W

Base Cleaning

All skis become dirty to some extent with use. If this dirt is not removed prior to waxing, it is literally worked into the base and thus reduces gliding properties.

Care starts with base cleaning.

Wax Remover

1. Scrape off base

Scrape off dirt and wax residue with the universal scraper.

2. Spray on Wax Remover

Spray or rub on the wax remover and leave it for a short while.

3. Rub off thoroughly

Rub it off thoroughly with Base Tex or the cleaning cloth and repeat if the degree of dirt so requires.

Hot waxing

1. Waxing

Drip on and iron in a soft wax (e.g. World Loppet yellow).

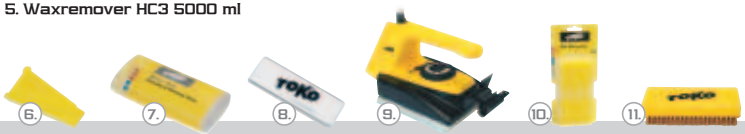
2. Scrape off

While the wax is still warm scrape it off with the Plexi blade. This removes dirt particles from the upper layers of the base.

3. Brush out

Uncover the base structure once again using the copper brush.

1. Waxremover HC3 200 ml
2. Waxremover HC3 500 ml
3. Waxremover HC3 1000 ml
4. Waxremover HC3 2500 ml
5. Waxremover HC3 5000 ml
6. Multi-purpose Scraper
7. Toko Base Tex
8. Plexi Blade
9. WaxIron 1200/600W
10. System-3 yellow, 0 – -4°C.
11. Copper Brush



Applying hot wax

1. Drip on

After cleaning the base, drip on the wax. Ensure that wax is applied evenly.

Tip:

For mixtures, simply hold the wax sticks together and possibly tie an elastic band around them.

2. Iron in

Push or pull the wax iron over the base slowly and evenly.

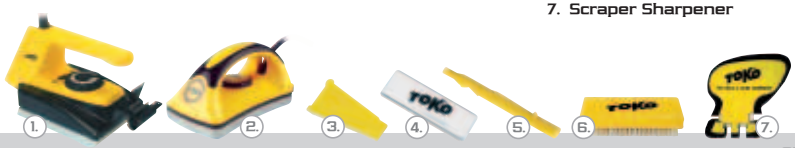
3. Scrape off

Scrape sidewalls and groove while wax is still warm. Allow to cool to room temperature and then use the Plexi scraper blade to scrape off the wax in the running direction.

4. Brush out

Brush out the remaining wax with a nylon brush.

1. WaxIron 1200/600W
2. WaxMouse 800W
3. Multi-purpose Scraper
4. Plexi Blade
5. Groove Pin Nordic
6. Nylon Brush
7. Scraper Sharpener



The highly fluorinated series is impressive in its perfect gliding properties and unmatched wax adhesion time over very long distances. The extremely smooth wax can be ironed on wonderfully and penetrates the base deeply. Adapted to the corresponding temperature range, Dibloc High Fluoro ensures a professionally prepared base for exacting racing demands.

1. Dibloc High Fluoro yellow, 0 °C/-4 °C
2. Dibloc High Fluoro red, -4 °C/-10 °C
3. Dibloc High Fluoro blue, -10 °C/-30 °C
4. Dibloc High Fluoro grey, Molybdenum -4 °C/-10 °C

Highly fluorinated hot wax system for competition use

1. Dibloc Low Fluoro yellow, 0 °C/-4 °C
2. Dibloc Low Fluoro red, -4 °C/-10 °C
3. Dibloc Low Fluoro blue, -10 °C/-30 °C
4. Dibloc Low Fluoro grey, Molybdenum -4 °C/-10 °C

Lightly fluorinated hot wax system for competition and training use

Dibloc High Fluoro Snow temperatures

	0 → -3°C 32 → 27°F	-3 → -8°C 27 → 18°F	-8 → -12°C 18 → 10°F	-12 → -30°C 10 → 22°F
❄	yellow / red	red / blue	blue	blue
❄❄	yellow	red / Molybdenum	Molybdenum / red	blue
❄❄❄	yellow / Molybdenum	red / Molybdenum	Molybdenum	blue

Dibloc Low Fluoro Snow temperatures

	0 → -3°C 32 → 27°F	-3 → -8°C 27 → 18°F	-8 → -12°C 18 → 10°F	-12 → -30°C 10 → 22°F
❄	yellow / red	red / blue	blue	blue
❄❄	yellow	red / Molybdenum	Molybdenum / red	blue
❄❄❄	yellow / Molybdenum	red / Molybdenum	Molybdenum	blue

System-3 Snow temperatures

	0 → -4°C 32 → 25°F	-4 → -10°C 25 → 14°F	-10 → -30°C 14 → 22°F
❄	yellow / red	red	blue
❄❄	yellow	red	red / blue
❄❄❄	yellow / red	red	blue

These high-quality waxes produce excellent gliding in training, provide high-quality base care and are ideal for treating both new and worn bases.

1. System-3, yellow, 0 °C/-4 °C
2. System-3, red, -4 °C/-10 °C
3. System-3, yellow/red, Set
4. System-3, blue -10 °C/-30 °C

Applying JetStream Powder & Bloc

In order to guarantee effective application of this wax, we recommend a base with Toko Dibloc High Fluoro.

JetStream Powder

1. Sprinkle on JetStream Powder

Sprinkle JetStream Powder evenly onto the base

2. Iron in

Dab at the powder with the wax iron and then glide over the base slowly but evenly (160 °C).

3. Scrape off

After allowing to dry completely, scrape off excess material with the Plexi blade.

4. Brush out

Use the horsehair brush to brush out the base thoroughly in the running direction.

Tip:
At the end, polish in the »JetStream dust« again using the Thermo Pad.

JetStream Bloc

1. Rub on JetStream Bloc

Rub on JetStream Bloc using even pressure.

2. Polish in

Use the Thermo Pad to polish in vigorously. The more friction that is produced the better JetStream adheres to the base.

Tip:
JetStream Bloc can also be ironed in. Application involves the same steps as ironing in JetStream Powder.

1. JetStream New Snow Race Bloc
2. JetStream Old & Artificial Snow Race Bloc
3. JetStream, New Snow Race Powder
4. JetStream Old & Artifical Snow Race Powder
5. Thermo Pad
6. Horsehair, Antistatic Effect
7. Plexi Blade
8. Waxiron 1200/600W

Applying Toko HelX

(100 % Fluoro Racing Liquid Wax)

For the gliding zones of skating and classic skis

In order to guarantee efficient application of this wax, we recommend a base with Toko Dibloc High Fluoro.

Tip:

A »foundation treatment« with JetStream Powder or Bloc guarantees even higher performance on tracks over 25 km. (see section entitled Applying JetStream)

1. Pre-polish

Pre-polish the base with the yellow side of the Dual Pad.

2. Spray on

From a distance of around 10 cm, spray a thin, even coating onto the base.

3. Polish

Allow Toko HelX to dry completely at room temperature and then polish well to a good shine using the white side of the Dual Pad.

1. Toko HelX warm
2. Toko HelX cold
3. Dual Pad

Liquid waxes

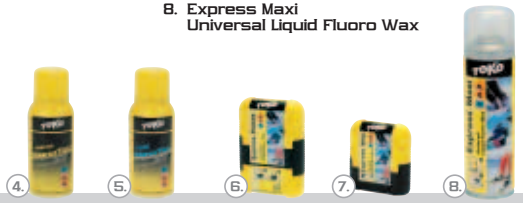
1. Apply

Spray on NanoTec HF2 or simply apply Express Maxi, Express Pocket and Express Mini and allow to dry.

2. Polish

After allowing to dry, polish the base well with the Thermo Pad.

4. NanoTec HF2 warm
5. NanoTec HF2 cold
6. Express Pocket Universal Liquid Fluoro Wax
7. Express Mini Universal Liquid Fluoro Wax
8. Express Maxi Universal Liquid Fluoro Wax



Applying rub-on and paste waxes

For the gliding zones of skating and classic

Rub-on waxes

1. Rub on

Rub-on Wax is rubbed into the base in a thin, even layer.

2. Polish

In order to achieve an improved gliding effect, it is recommended that the waxed ski should be polished with a Thermo Pad.

Paste waxes

1. Apply

Paste wax is applied to the base in a thin, even layer.

2. Polish

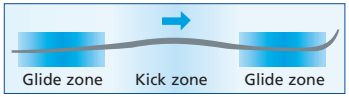
In order to achieve an improved gliding effect, it is recommended that the waxed ski should be polished with a Thermo Pad.

Tip:
Paste waxes require adequate time to dry and harden.

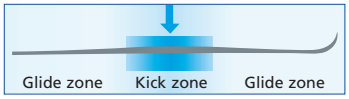
1. Express TF90 Universal Paste Wax
2. Express Blocx Rub-on Wax
3. Dibloc High Fluoro, Rub-on-Set
4. Dibloc High Fluoro, Paste Wax
5. Thermo Pad

Classic Cross country skiing – an adventure and a challenge!

It is classic cross-county skiing that places the greatest demands on material. Since there are two different characteristics that are at play here, base preparation takes on particular significance. Indeed, classic cross-country skis have to achieve something highly contradictory in nature: gliding forwards quickly and effortlessly, yet holding sure when kicking and when stepping into skis. And: the flex distribution and hardness of the ski construction must be tailored to the weight of the skier.



In the classic ski, the kick zone stretches from the heel of the boot forwards by around 30–60 cm. The length depends on terrain, snow and ski flex, as well as the condition and technique of the skier.



If everything is working optimally only the glide zones are in contact with the snow when gliding. In this case, glide wax reduces glide-resistance to a minimum. However, in order to ensure that when kicking-off, the ski does not slide backwards or slip, and when gliding it does not exert any braking action, the ideal grip wax displays the greatest possible static friction coefficient at the lowest gliding friction.

The leg-push begins from a stationary ski; the kick zone is completely depressed. It is then that grip waxes (dry waxes, klisters) »grip« the snow and provide hold for the kick process. Classic skis with scales, mechanical or chemical kick zones should not, under any circumstances, be treated with grip wax. In such cases, special cleaning products cause problems by leading to the collection of dirt and excess wax from the track in the climb aid and prevent the climb zones from icing over.

Kitted out with excellent ski equipment and the first-class grip waxes from Toko, every »classic« trip out on the cross-country tracks of this world will become an unforgettable experience. That's a promise.

Carbon Gripwax-Line

GripWaxes

...for maximum grip with optimal gliding properties.

1. Roughen the kick zone

Use sand paper to roughen the kick zone and remove dust with Base Tex.

2. Apply Base Green

Base Green serves as an unbeatable base for all grip waxes. It dramatically increases wax adhesion.

3. Iron in

Iron in the base wax and allow the ski to cool down well in the cold.

4. Cork

Cork the base lightly with the Plasto cork.

5. Apply the wax

Apply the desired dry wax in 3-4 thin layers.

6. Cork

Cork each layer separately.

1. Carbon BaseWax green
2. Carbon GripWax silver
3. Carbon GripWax yellow
4. Carbon GripWax red
5. Carbon GripWax viola
6. Carbon GripWax blue
7. Carbon GripWax mint
8. Sportline GripWax warm
9. Sportline GripWax cold
10. Sportline GripWax Xcold
11. WaxMouse 800W
12. Plasto Cork
13. Wax Cork

Sportline

...for maximum grip with optimal gliding.

1. Roughen the kick zone

Use sand paper to roughen the kick zone and remove dust with Base Tex.

2. Apply Base Green

Base Green serves as an unbeatable base for all klisters. It dramatically increases the adhesion of the klister.

3. Iron in

Iron in the base klister and allow the ski to cool down well in the cold.

Tip:
After use, clean the iron well using wax remover.

4. Apply the Klister

Apply the klister to the kick zone spaced equidistantly

5. Cork

Cork the klister with the Plasto cork or rub it into the kick zone with the ball of your hand.

1. Grip & Glide Wax

Liquid wax for the glide and kick zones of nordic skis with mechanical climb aids.

Apply, leave to dry and polish with the Thermo Pad.

1. BaseKlister green
2. CarbonKlister silver
3. CarbonKlister orange
4. CarbonKlister multiviola

Carbon Klister-Line

5. CarbonKlister viola
6. Sportline Klister warm
7. Sportline Klister cold
8. Toko Nordic Sportline Set
9. Grip & Glide Wax

Sportline

10. WaxMouse 800W

X-PRESS

11. Plasto Cork
12. Wax Cork

Schneetemperatur in °C + °F Snow temperature in °C + °F	Ungemischte Waxe Pure Waxes	Härtegrad Grade of hardness	Gemischte Waxe Mixed waxes	Verhältnis Ratio	Schneetemperatur in °C + °F Snow temperature in °C + °F	Schneetyp Snow type
		10.0				
		9.5				
0 → -4°C 32 → 25°F	Dibloc HF yellow Dibloc LF yellow	9.0				
		8.5	Dibloc HF yellow/red	2:1	0 → -2°C 32 → 28°F	
		8.0	Dibloc HF yellow/red	1:1	0 → -4°C 32 → 25°F	
		7.5				
		7.0				
0 → -4°C 32 → 25°F	System-3 yellow	6.5	Dibloc HF yellow/red	1:2	-2 → -6°C 28 → 21°F	
		6.0	Dibloc HF yellow/molyb.	1:1	-1 → -5°C 30 → 23°F	
		5.5				
		5.0	Dibloc HF yellow/blue	1:1	-2 → -6°C 28 → 21°F	
-4 → -10°C 25 → 14°F	System-3 red	4.5				
-4 → -10°C 25 → 14°F	Dibloc HF red Dibloc LF red	4.0	Dibloc HF red/molyb.	1:2	-5 → -10°C 23 → 14°F	
-4 → -10°C 25 → 14°F	Dibloc HF molyb. Dibloc LF molyb.	3.5				
		3.0				
		2.5	Dibloc HF red/blue	2:1	-7 → -12°C 19 → 10°F	
-10 → -30°C 14 → 22°F	System-3 blue	2.0	Dibloc HF blue/molyb.	1:1	-9 → -14°C 16 → 7°F	
		1.5				
		1.0	Dibloc HF blue/red	2:1	-12 → -20°C 10 → -4°F	
		0.5				
-10 → -30°C 14 → 22°F	Dibloc HF blue Dibloc LF blue	0.0	Dibloc HF blue		-15 → -30°C 5 → 22°F	

Downhill/snowboard and cross-country

Whether you are a beginner or a professional service technician when it comes to waxing or tuning, it is always recommended to fix the sporting appliance securely. Toko offers several useful fixing devices.

1. Workbench with Ski Vise World Cup

The table with its clamping device is the perfect combination for preparing skis. All skis available on the market can be easily fixed with the Ski Vise World Cup. The Ski Vise World Cup can also be attached to a work surface.

2. Nordic Ski Support

Slot-in supports for cross-country skis to fit the Ski Vise World Cup.

3. Ski Vise World Cup

4. Compact Vise

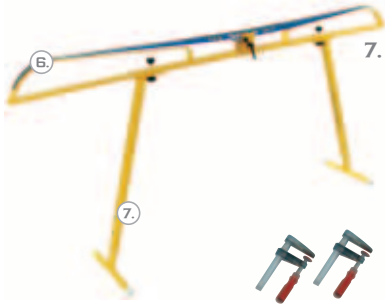
Ski holder for working on skis. The holder protrudes over the edge of the table and can thus be used independently of high bindings or binding plates.

5. Board Grip

Non-slip grip for preparing bases. The board can be attached vertically for working on the edges.

6. Table with Wax & Service Boy

Fastening device for cross-country skis. Can be easily mounted to any kind of table or work surface using the clamps supplied with the kit.

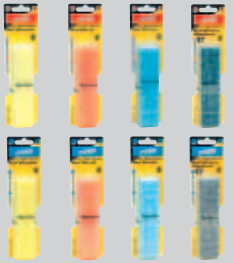
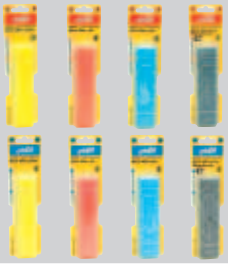


7. Supports for the Wax & Service Boy

Supports for the Wax & Service Boy.

Types of application

The more fluorine a wax contains, the more water can be displaced.
This enables the ski/snowboard to glide better.

	Hot	Liquid	Rub-on	Paste
100% Fluoro	**JetStream Bloc**  Alpine – page 22 Nordic – page 38 **JetStream Powder**  Alpine – page 23 Nordic – page 38	**Toko HelX** Alpine – page 25 Nordic – page 40 	**JetStream Bloc**  Alpine – page 22 Nordic – page 38 **JetStream Powder**  Alpine – page 23 Nordic – page 38	
High Fluoro	**Dibloc High Fluoro**  Alpine – page 20 Nordic – page 36	**NanoTec LF2** Alpine – page 26 Nordic – page 41 	**Dibloc High Fluoro** Alpine – page 27 Nordic – page 43 	**Dibloc High Fluoro Paste** Alpine – page 27 Nordic – page 43 
Low Fluoro	**Dibloc Low Fluoro**  Alpine – page 20 Nordic – page 36	**Express Universal** Alpine – page 26 Nordic – page 41 	**Express Blocx** Alpine – page 27 Nordic – page 43 	**Express TF90** Alpine – page 27 Nordic – page 43 
No Fluoro	**System 3** Alpine – page 21 Nordic – page 37  **All-in-one Wax** Alpine – page 16 and 25  **X-Cold Powder** page 24