

The logo for START, featuring the word "START" in a bold, yellow, sans-serif font with a registered trademark symbol, set against a red background that is part of a larger red curved shape at the top of the page.

**START**

A photograph of a snowy winter landscape. In the foreground, several parallel tracks from skis or snowshoes lead from the bottom left towards the center. In the background, there are several wooden buildings with snow-covered roofs, and a line of evergreen trees under a clear sky.

# Waxing guide for XC skiing

[www.startskiwax.com](http://www.startskiwax.com)













**START**



Start n-Series

*Winner's  
Choice*



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# 1. Safety instructions

Different fluoro combinations are starting to be used as wax rawmaterials. This is why it is very important to know safe way to use waxes. When buying waxes be sure that there are user instructions and proper product information with. Normaly familiar and well known tarde mark ensures quality and safety for use.

Follow the instuctions below when using fluorinated waxes.

## **Avoid too high temperatures**

By using iron in waxing avoid too high temperatures, because overheating sets toxic gases free.

## **Take care of air condition**

Inhaling fluoronated particles and gases is harmful for your health. Take care of air condition and use safety mask when ironing or brushing fluorinated waxes.

## **Do not use gas flames or open fire**

The waxing cabin it is forbidden to use gas flames or open fire, neither smoking is not allowed.

## **Remember tidiness**

Wash hands and clean clothes after waxing. There might be fluorinated particles or dust remains in the clothes.

## **Safety instructions for flying**

To aeroplane is not allowed to take flammable products like wax removers, liquide gliders and liquig kick waxes. Also fluorinated powders and other products without sufficient clearanceof consumption may be removed from backage.

### **List of the products not allowed to take to aeroplane**

- Wax removers
- Gliding zone cleaners
- Silicons or ice preventing products
- Ultra Liquid Glider
- Ultra Liquide Kick Wax
- BMR9 Glider
- SFR400 Glider
- Golden Line Humid and Cold Liquids

## 2. Base preparation

### Base preparation for new skis

Proper preparation for the new ski is basic condition for further success in the waxing and using the ski. We recommend that the new skis are not used or grinded before proper preparation. Basic preparation is done by using Base Waxes made for this use and which are soft enough to be well absorbed to the base.

#### Check new skis to control possible failures in manufacturing.

1. Wipe the bases with wax remover moistured fiber tex.
2. Melt Start BW-base wax or SW service wax on the base.
3. Absorb the wax in the base with the mild (110 C°) temperature moving the iron several times back and forwards on the base.
4. Scrape all removable wax as warm away with sharp acryl scraper.
5. Repeat the procedure with Start BW-base wax 2-3 times, but let the wax cool down before scraping. For graphite bases we recommend to use Start BWG-graphite base wax 1-2 times after base preparing. After this skis are ready for glide waxing.

### Base preparation for used skis

Preparation for used ski is similar with new ski, but before base waxing the need for possible grinding should be checked. Grinding removes old scratches and refreshes the structuring for the bases. Base waxing is allways done after grinding and during the season when needed.

#### Start Base and service gliders

- BW Base wax
- BWLF Fluorinated base wax
- BWG Graphite base wax
- SW Service wax
- SWLF Fluorinated service wax



### 3. Choosing glider

#### Defining snow conditions

Define and evaluate snow conditions and choose waxes to be used based on this. Note follow fact by evaluation:

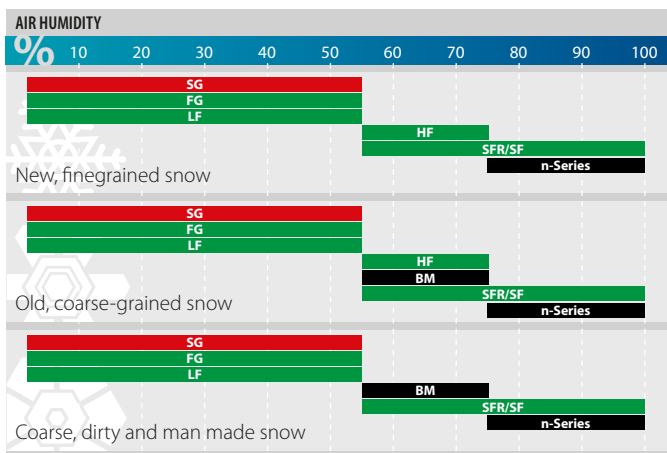
- Air temperature, evaluate possible changes during the race
- Snow temperature. Snow warms up slower than air during the day. The snow will remain colder than air.
- Air humidity. If humidity is high the snow will be moistured too. Exeption for this is when it has been very cold for long time, the snowsurface is dry and snow crystals unnormal hard and sharp.
- The consistency of the track. If the track is made of man made snow, it consists more moisture than nature snow and is more abrassive and coarse-garined.

If you don't have measuring equipments, request for temperature and humidity information from the competition organizer. They tell you how the track is made and from which kind of snow. Snow conditions you can determine yourself. Based on these facts you can select right waxes to use.

Controlling the humidity will help you to choose glider between fluorinated and normal gliders. Also the type of snow helps you to pick up suitable wax. Start has special range of gliders for different types of snow. The following chart will show the current ranges for different waxes.

START-product range consists of six different glider ranges, which have been developed based on long research and test work to get best possible material combinations.

#### Glider choosing chart:



**START SG-Gliders**

When humidity is lower than 45 %, choose glider from non-fluorinated SG-range due to the temperature. Used as racing and training gliders and under the fluorinated gliders. SG-Gliders do not include silicons or any other additives. This makes them to suit well as base gliders under the fluorinated waxes.

**Start SG -range**

- SGG graphite
- SG2 white (+10 °...-1 °C)
- SG4 violet (-1 °...-7 °C)
- SG6 blue (-7 °...-12 °C)
- SG8 green (-10 °...-30 °C)

 **Rh 0% ...55%**

**START FG -Gliders**

Fluorinated FG gliders are used when humidity is lower than 45%. Used as racing and training gliders and under high fluor gliders.

**START FG -gliders**

- FG12 (+3°...-3 °C)
- FG14 (-2°...-7 °C)
- FG16 (-7°...-12 °C)
- FG18 (-10°...-30 °C)

 **Rh 0% ...55%**

**START LF low fluorinated gliders**

When humidity is 40-60%, choose low fluorinated glider from START LF-range. LF-gliders are used as racing and training gliders and suitable to use under other fluorinated gliders.

**START LF -gliders**

- LF04 red (0 °...-3 °C)
- LF06 purple (-3 °...-8 °C)
- LF07 blue (-7 °...-12 °C)
- LF08 green (-8 °...-30 °C)

 **Rh 0% ...55%**

**START HF high fluorinated gliders**

When humidity is 55-75%, choose high fluorinated glider from START HF-range due to the temperature. HF-gliders are mostly used in new and varying snow.

**Start HF -gliders**

- HFG fluor graphite
- HF20 white (+10 °...0 °C)
- HF40 red (0 °...-3 °C)
- HF60 purple (-2 °...-7 °C)
- HF80 green (-7 °...-25 °C)

 **Rh 55% ...75%**



## START Black Magic (BM)-molybdenum/fluor gliders

START BM-glidens consist of molybdenum fluor and are used mostly in old, coarse-grained and dirty snow when humidity is high (55-75%). Working very well especially for man made snow.

### START BM-range:

- BM2 yellow (+10 ° ...0 °C)
- BM4 purple (0 ° ...-6 °C)
- BM6 green (-6 ° ...-25 °C)



**Rh 55% ...75%**



## START – Nano fluor gliders

The Start n-line is based on the same technology as the alpine AWC-line. n-line gliders are produced with the latest nanotechnology. Nano-particles are extremely tiny in size. The n-glidens have a huge number of these particles - enough to cover an entire airfield if they were spread in one layer. Using different flour types for different temperatures and snow conditions optimizes n-line gliding abilities. In every snow condition, friction between the ski base and snow melts thin water film, which includes also dirt particles. Good waxing must also prevent dirt build up. Maximized ability to prevent dirt gives the best glide for different snow conditions. Self cleaning ability of nano-flour particles also guarantees excellent glide durability.

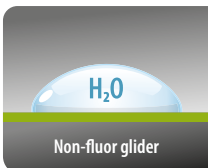


### START n -Series luistovoiteet:

- n2 red (+5 ° ...-1 °C)
- n4 purple (-1 ° ...-6 °C)
- n6 blue (-5 ° ...-15 °C)



**Rh 75% ...100%**





## 4. Glide waxing

Glide waxing consists of three phases: base glide waxing, glide waxing and finishing.

### Base waxing

The purpose of base waxing is to create durable dirt and moisture preventing primer under the glide wax. For this purpose suits very well Start SGG (Graphite) or Start SG6 (blue) gliders. Under the fluorinated waxes are mostly used Start HFG-fluor graphite or BWLF-low fluorinated base glider.

**Note!** Under the Black Magic-molybdenumfluor gliders is recommended Start LF08(green) or BWLF low fluorinated gliders.

- Be sure that the base is dry and clean before starting waxing
- Primer the base
  - Start SGG Graphite under the non fluorinated SG-glidens
  - Start HFG fluorgraphite or BWLF fluorinated gliders
  - Start LF08(green) or BWLF fluorinated glider under the Start BM-molybdenum fluor gliders
- Scrape extra wax away and use Brass brush to clean the structure or rills of the base.

### Glide waxing

Try to define snow conditions very carefully to get best possible knowledge for choosing glider. If special finishing is not needed, the glider will be the finishing layer.

If conditions are very wet and the track is compact, big structures are needed in the base. Check the base. If it is even or there is minor structure, use structure tooling to make bigger structures to optimize gliding features.

1. Melt glider to the base with waxing iron and let it absorb well.
2. Scrape extra wax away with acryl scraper. Hard gliders (graphite, blue, green and BM6) can be scraped warm.
3. Brush the base after scraping very well (hard gliders first with steel, copper or brass brush).
4. Finish the brushing with nylon or natural hair brush to clean the structuring in the base.
5. Polish with fibertex to get the brushing dust away.

## 5. Start fluor powders, blocks and liquids

Fluor powders and liquids are made for finishing the waxing and to reduce the tension between the water film and base. Especially when the track is compact and the humidity is high (>75%). Snow might be new and will turn compact under the base preventing the water film to escape. This increases the suction effect caused by too thick water film. In disciplines using same track (xc, jumping) the glaze effect of the surface can be noticed after some runs. This is a mark of constant water film. This will cause a suction effect which can be reduced with top finishing fluor products, base structuring or Start Golden line polymer gliders. Waxing can be made according to the duration of the event with hot or cold waxing.

### START R-serie fluor blocks

Start -fluor bolcks (SFR92,SFR99 and BMR5) are concentrated fluor carbon based finishing/coating waxes used to add quickness and glide to the ski under humid conditions. Start fluor block usage recommendations:

#### START Fluor Blocks:

- n9 (+5 ° ...-5 °C)
- SFR92 (-9 ° ...-20 °C)
- SFR99 (+9 ° ...-9 °C)
- BMR5 (+10 ° ...-5 °C)
- LF03 (+1 ° ...-10 °C)



**Rh 75% ...100%**

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#### Fluor block cold application:

1. Apply fluor bolck thin layer to glider waxed base.
2. Rub the layer with nature cork. Brush with finishing brush the structure of the base clean.
3. Polish with fibertex. This top finishing suits on the fluor powders too.

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#### Fluor block hot application:

1. Apply thin layer of block glide waxed base.
2. Fasten fluor block layer with wax iron threw fibertex. Cover the bottom surface of the iron with fibertex so that iron itself does not touch the wax. Move iron evenly along the base. Fibertex prevents fluor gases to escape to air and evens the heat of the iron. The heat should be at the same level with what the glider below was worked with.
3. Let the base cool down, brush slightly with finishing brush and polish with fibertex.

## 6. Coating

Finalizing gliding base has a significant role for getting good glide. With gliders themselves it is not always possible to get optimal surface. This is why it is beneficial to coat the gliding surface with special waxes. With coatings it is possible to soften gliding surface, prevent moisture penetrating or harden the base for better wax durability. Check the purpose of different coating products. Note that coating is made after structuring the base.

- SF10/SF30 (+5° ...-5 °C)
- SFR40 (+5° ...-5 °C)
- SFR60 (-3° ...-7 °C)
- SFR75 (-5° ...-15 °C)
- BM7 (+10° ...-3 °C)
- n5 (+5° ...-2 °C)
- n7 (-2° ...-10 °C)



**Rh 75% ...100%**

Powdering can be made by hot or cold application.

### Fluor powder hot applying



1. Spread even layer of powder on to the pre-prepared base surface.



2. Melt the powder with the waxing iron until the wax forms into a smooth layer on the base surface.

**Note! The melting point for PF-powders are 150° C and other powders 130° C**



3. Let cool down and remove extra wax by brushing with nylon and finishing brush.



4. Brush the gliding base after the testing once more with finishing brush.

### Cold applying for fluor powders:

1. Spread the powder evenly on to the pre-prepared base
2. Adhere the powder evenly by rubbing with natural cork and brush with finishing brush.

## Usage of Start Fluor Powders:



### Start SF10 / SF30 Fluor powder

Humidity over 75%. Universal powder for variable snow conditions.



### Start SFR40 Fluor powder

Humidity over 75%. For new, fine and old snow +5...-5°C.



### Start SFR60 Fluor powder

Humidity over 75%. For new, fine and old snow -3...-7°C.



### Start SFR75

Humidity over 75%. For new and fine snow -5° ...-15°C.  
Use together with LF- and HF- gliders.



### Start BM7

Humidity over 75%. For coarse-grained and dirty snow  
+10° ...-3°C. Use together with BM-glidern.



### START n-flour powders

Start n5 - nano-flour powder will maximize the flour content of the base in wet conditions. Powder is made to work best with n2- and n4-glidern, but it is possible to use it with other HF-glidern as well.

Start n7-nano-flour powder is produced to work in colder conditions with n4- and n6-glidern. For temperatures just below 0°C-degree choose n4-glider. In colder conditions use n6-glider with n7 -powder.



Usage amounts of powders. On the left picture normal powder and on the right n-Series powder:

Powder melted correctly looks smooths and even mat surface.

## START R-series Fluor liquid waxes

SFR400 Sprint and BMR9 are modern fluor liquid gliders, which are easy to use and durable for sprint and junior usage.

### SFR400 Fluor liquid glider

Humidity over 75%. For old and variable snow conditions +2°...-7°C. Can be used simultaneously with all gliders.

### BMR9 Molybdenum/fluor liquid glider

Humidity over 75%. For coarse-grained and dirty snow +10°...+3°C. Can be used simultaneously with all gliders.



### Waxing with R-series liquid waxes:



Spread liquid glider on to the pre-prepared gliding base. Let dry well and remove extra wax carefully by brushing.

## START n-Series fluor liquids



### Start n3 Fluor liquid

n3 nano fluor liquide for short distances, can be used on the top of the powder or glider.

### START n1 Fluor liquid

If humidity is very high and there is standing/free water on the snow, n1-liquide is necessary after powdering with n5-powder. n1-liquide creates a durable, tight nano-flour film on the base. This film prevents water and minimizes any dirt effect that might reduce glide.

### Waxing with Start n1-liquid:



1. Apply the n1-liquid on to the gliding base.  
**Note!** Only 2-3 drops for entire base both sides of the groove.



2. Spread liquid to get very thin film on to the base e.g with thumb or fibertex.



3. Remove extra liquid by brushing with natural hair brush and wipe finally with fibertex.



4. Polish the base with hard nylon brush and finishing brush. Wipe once again with fibertex in order to get very thin film on to the base. This phase is repeated until no liquid removes from the base.



**Note!** The waxing will not work if n1-liquid layer is too thick!



### 7. Base structuring

Start has developed this structuring tool in collaboration with the Finish Ski Association's Service team. In moisture and wet snow conditions these light structures, pressed on the gliding base, prevent the suction effect caused by water film between the ski base and snow. Structuring the base creates the possibility of getting air into the water film, which is beneficial for glide. By using the Start Structuring tool the ski bases can be a fine stone grinded with fine stone grind structure. The needed structure can be made due to the snow conditions each time and removed by some hot waxing actions. This expands the function range of the ski.

Attach the pre-prepared ski well to the waxing table or profile. If you want to use liquid waxes as coating, structure the gliding bases before liquid waxing.

Evaluate the snow condition very carefully and choose suitable roll to work with.



**Structure roll 5** for cold snow (also fine snow) when humidity is more than 75% (reserve part).



**Structure roll 10** for old cold snow when humidity is more than 75%.



**Structure roll 20** for high humidity and moisture snow 0°...-5°C (reserve part).



**Structure roll 30** for moisture and wet snow.



**Structure roll 100** for moisture snow (reserve part).



**Structure roll 300** for wet snow and together with roll 30 for very wet conditions.

1. Structuring is made by pushing the tool against the base running from tip to tail. Place Start structuring tool on the gliding base at the tip so that structure roll is in the back side and the driving wheel on the front side of the tool.
2. Lock the structuring roll by pushing the button on the wall and place the tool exactly to the place wanted. Acting like this you can always renew the structure. Before starting structuring check that the guiding rails are placing correctly on both sides the ski walls
3. Press Start Structuring tool properly against the base and push the tool towards the tail along the base.
4. After structuring, brush properly with nylon and finishing brush.

## 8. Kick waxes

Start has three different full lines of kickwaxes in the product range, which can be used alone or parallel with other lines. These lines have suitable wax for every kind of snow conditions in both recreation and racing skiing.

### START tar based kick waxes

- for fine-grained, new snow when the humidity is low.

New snow often results in changing track conditions. It is difficult to get grip, and the risk of icing is great. Tar waxes are exceptionally suitable for new snow conditions, since the tar adapts to temperature fluctuations, increasing the range of conditions in which a wax can be used, and decreasing the risk of icing. The wax mixtures are relatively soft, and invariably require a base wax to be used, usually the Start regular base wax. Tar waxes harden when they are cooled, and thus always need to be applied outside, so that they can be applied in thin, discrete layers, this will also aid in their effectiveness. In general, the tars are an easy to use

### START synthetic kick waxes

- for old, coarse-grained snow.

Old coarse-grained snow is more abrasive than new snow, and thus requires waxes with a higher durability. On the other hand, obtaining grip is relatively easy, but requires the wax to be hard enough to maintain its gliding properties. Synthetic waxes are tougher and harder than the tar waxes, and are therefore more durable and improve gliding properties. To ensure that the wax stays on the base, particularly for longer distances, it is recommended that base wax or base klister be applied under these waxes. This base wax layer should be applied using an iron. The surface layers should always be applied outside.

### START MFW molybdenum fluor kick waxes

- new and old snow, humidity over 55%

In humid conditions, snow surface is often dirty and tracks get shiny and the suction (liquid friction) decreases glide, which also makes it difficult to get a good grip. You can then select a softer grip wax than the temperature would require, but it absorbs dirt and moisture, which in turn lessens glide. A better solution is to use a molybdenum fluor grip wax, in which molybdenum's density has been used to prevent moisture from absorbing into the wax. On the other hand, fluor has been used to lower the wax's surface tension, which increases greatly both grip and glide properties. MFW grip waxes' molybdenum brings density into the wax mixture, which repels effectively dirt and moisture. MFW series molybdenum fluor grip waxes are in basic nature softer than normal waxes and give a better grip in humid conditions. Particularly in humid conditions, START MFW molybdenum fluor grip waxes are easier to ski with than standard waxes.

### START Black Magic kick waxes

The chemical composition of Start Black Magic and Black Magic Fluoro make them an entirely new type of finishing layer grip wax, which can make grip waxing easier. These waxes can be used as a thin surface layer on top of the wax in all conditions, or mixed with other waxes in changing conditions. Start Black Magic waxes are a powerful deterrent to dirt accumulation and icing. At the same time increase the grip, glide and durability of the wax. The Black Magic waxes perform well in a broader range of temperatures, which eases waxing, since the ski doesn't need to be re-waxed each time it's used, even though weather conditions might be significantly different.

### START Racing Fluor Kick Waxes

RF-kick wax line is a fluorinated kick wax line. Suitable for use as kick wax alone or as a finishing wax applied on the top of kick waxing



**Tar Kick Waxes:**

- Yellow (+2 ° ... +1/2 °C)
- Purple (+1/2 ° ... -1/2 °C)
- Red (0 ° ... -3 °C)
- Blue (-2 ° ... -7 °C)
- Green (-7 ° ... -12 °C)
- Black (-10 ° ... -30 °C)

**Rh 55% ...75%****Synthetic Kick Waxes:**

- Yellow (+3 ° ... +1 °C)
- Purple (+1 ° ... -3 °C)
- Blue (-2 ° ... -6 °C)
- Green (-5 ° ... -10 °C)
- Nordic (-10 ° ... -30 °C)

**Rh 0% ...55%****MFW Molybden Fluor Kick Waxes**

- MFW Yellow (+3 ° ... -1 °C)
- MFW Purple (+2 ° ... -1 °C)
- MFW Red (0 ° ... -3 °C)
- MFW Blue (-3 ° ... -10 °C)

**Rh 55% ...100%****Black Magic Molybdenum kick waxes:**

- BM (+2 ° ... -30 °C)
- BM Fluor (+2 ° ... -30 °C)

**Rh 75% ...100%****RF Racing Fluor Kick Waxes**

- RF Yellow (+3 ° ... +1 °C) Rh 55% ... 100%
- RF Purple (+2 ° ... -2 °C) Rh 55% ... 100%
- RF Red (-1 ° ... -5 °C) Rh 55% ... 100%
- RF Blue (-4 ° ... -10 °C) Rh 55% ... 100%

**Rh 55% ...100%**

## 9. Kick waxing

1. Check that the grip zone has been properly prepared and cleaned.
2. Choose a base wax that is suitable for the conditions. Then, depending upon which base wax is chosen, either iron and cork it onto the ski according to the appropriate directions.
3. Apply one thin layer of grip wax appropriate for the day's conditions, and smooth it with a cork.
4. Cool the waxed ski outside, and then apply many thin layers of an appropriate wax for the day's conditions. Smooth each layer with a cork before applying any subsequent layers.
5. Test the function of the kick waxing. If needed apply softer wax to improve kick or cover with thin layer of START BLACK MAGIG grip wax.

# 10. Klister

There are different types of klister in Start wax collection

- Base klister
- Start klister
- Specialty klister
- Molybdenum/fluor klister

All start klister may be used alone or together with other klister as a kick wax.

Klister are used for grip wax when the track is extremely icy or wet. Klister are stickier than hard waxes. They are also more durable, adhering to the ski for a longer period of time in abrasive and icy conditions. In coarse, wet snow conditions, grip properties of klister are again better than hard waxes. Thus, in these conditions they are generally a better choice than hard waxes. If the track is dirty, it is necessary to apply a layer of either hard wax or a specialty finishing wax product to resist dirt and debris accumulating in the grip zone. Note! Klister are much softer than hard waxes, and that loose snow can stick to klister, particularly if the skier stands in one spot with klister waxed skis on. This snow can be loosened from the ski by kicking it vigorously down onto the track surface.

## Standard Klister:

- Red
- Special (+2 ° ... -2 °C)
- Purple (0 ° ... -5 °C)
- Blue (-4 ° ... -15 °C)



**Rh 55% ...100%**



**Rh 55% ...100%**



## MFW Klister:

- Yellow (+10 ° ... +1 °C)
- Red (+1 ° ... -5 °C)
- BM white (+10 ° ... -10 °C)



**Rh 55% ...100%**



## 11. Waxing with Klusters



1. Clean the grip zone of the ski. When using klusters, the waxed area of the grip zone is generally shorter than when using hard waxes. Abrade the grip zone with 80-150 grit sandpaper



2. Warm the klister in it's tube with a hot air gun. Warm klister is softer and easier to apply in an even layer. Squeeze klister onto the grip zone, on both sides of the groove.



3. Spread the klister with your thumb, hand, or with a cork.



4. Clean any excess klister from the groove and side walls of the ski.

Put the ski outside and allow it to cool. Assess the weather, and track conditions to determine the need for a covering layer. If one is needed, choose an appropriate wax to use for this coveringlayer. Apply to the cooled surface using the appropriate directions. **Note!** Finished klister wax base should not be touched with your hands!!

# New Snow +3°...+1°C

## GLIDE WAXING

**Alternative I**    Base:            SWLF fluorinated service glider  
                           Glide:            n2 nano fluorinated glider  
                           Top:             n5 nano fluor powder

Rain

**Alternative II**    Base:            BWLF low fluorinated base wax  
                           Glide:            n2 nano fluorinated glider  
                           Top:             n1 –nano liquid and on the top n5 nano powder

**Base structuring:** Start Structure Tool roll “Spruce” number 30 for skating and roll “Straight” number 300 combined with roll “Spruce” number 30 for classic skiing.

**Start note:**       Distances longer than 10 km, use as base LF08 fluorinated Glider. For juniors HF20 can be used as glider and SFR99 instead of Powder.

## KICK WAXING

**Alternative I**    Base:            Spread Base Klister with heat on the base  
                           Kick:            Spread thin layer of Purple klister and on the top Universal Plus- klister mix 20/80.

Rain

**Alternative II**    Base:            Spread Base Klister with heat on the base  
                           Kick:            Mix Red-klister and Universal Wide-klister together. Let cool well!

**Start note:**       If kick is not good enough, add some Yellow MFW-klister to the mixing.

## New snow +1°... 0°C

## GLIDE WAXING

**Alternative I** Base: SWLF fluorinated service glider  
 Glide: n2 nano fluorinated glider  
 Top: n5 nano fluor powder

Sleet storm

**Alternative II** Base: LF8 low fluorinated Glider  
 Glide: HF20 high fluorinated Glider  
 Top: SFR40 fluor powder

Base structuring: For Skating Start Structure Tool roll "Spruce" number 10. For Classic roll "Straight" number 300 and on the top roll "Spruce" number 10.

**Start note:** For juniors SFR99 can be used instead of powder.

## KICK WAXING

**Alternative I** Base: Spread Base Klister with heat on the base  
 Kick: Spread Special- and Universal Wide- klister mixed 20/80

Sleet storm

**Alternative II** Base: Spread Base Klister with heat on the base  
 Kick: Spread Universal Wide -klister on the base. Add (6-7) drops of Universal Plus Klister and mix.

**Start note:** If kick is not good enough, add some yellow MFW-klister on mixing.

# New snow 0°C

## GLIDE WAXING

Humidity over 85%

<b>Alternative I</b>	Base:	BWLF low fluorinated base wax
	Glide:	n4 nano fluorinated glider
	Top:	n5 nano fluor powder

Snowing

<b>Alternative II</b>	Base:	LF08 low fluorinated Glider
	Glide:	HF20 high fluorinated Glider
	Top:	SFR40 fluor powder

Base structuring: Start Structure Tool roll "Spruce" number 10, only for classic skiing.

**Start note:** For juniors and Sprints SFR99 or SF10 can be used instead of SFR40.

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## KICK WAXING

<b>Alternative I</b>	Base:	Base wax with heat on the base
	Kick:	RF-yellow (+3...+1C) kick wax 3-4 layers.

**Start note:** If kick is too sticky or is collecting ice, couple layers of Nolla Tar (+½° ... -½°C) kick wax can be added on the top. If still not grip enough, thin cover of BM non fluorinated wax can be added on the top.

## New snow 0°... -1°C

## GLIDE WAXING

Humidity over 85%

<b>Alternative I</b>	Base:	BWLF low fluorinated base wax
	Glide:	n4 nano fluorinated glider
	Top:	n5 nano fluor powder

Snowing

<b>Alternative II</b>	Base:	BWLF low fluorinated base wax
	Glide:	HF40 high fluorinated Glider
	Top:	SFR40 fluor powder

Base structuring: Hard track; Classic skiing Start Structure Tool roll "Spruce" number 10

**Start note:** For juniors SFR99 or SF10 fluor powder can be used as top finishing.

## KICK WAXING

<b>Alternative I</b>	Base:	Base wax with heat on the base
	Kick:	Spread 3-4 layers of Synthetic Purple (+1°...-3°C) on the base
	Top:	Very thin layer of Violet MFW (+2°...-1°C) kick wax

Snowing

<b>Alternative II</b>	Base:	Base wax with heat on the base
	Kick:	RF Violet (+2...-2C) 3-5 layers. Smoothen well.

# New snow -1°... -3°C

## GLIDE WAXING

**Alternative I**    Base:            BWLF low fluorinated base wax  
                           Glide:            n6 nano fluorinated glider  
                           Top:              n5 nano fluor powder

Snowing

**Alternative II**    Base:            LF08 low fluorinated Glider  
                           Glide:            HF40 high fluorinated Glider  
                           Top:              SFR40 fluor powder

Base structuring: Hard track; Classic skiing Start Structure Tool roll "Spruce" number 10.

## KICK WAXING

**Alternative I**    Base:            Base wax with heat on the base  
                           Kick:            RF-Red (-1°...-3°C) kick wax 3-4 layers. Smoothen well!

Snowing

**Alternative II**    Base:            Base wax with heat on the base  
                           Kick:            Spread 2-3 layers of synthetic Purple (+1°...-3°C) on the base  
                           Top:              1-3 layer of Synthetic Red (-1°...-3°C) kick wax. Then 1-2 layer of Tar Red (0°...-3°C) kick wax

**Start note:**    If the grip is not good enough, very thin layer of fluorinated BM kick wax will help.



## New snow -2°... -6°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	BWLF low fluorinated base wax
	Glide:	HF60 high fluorinated Glider
	Top:	SFR60 fluor powder

**Start note:** For juniors SFR99 can be used as top finishing.

## KICK WAXING

<b>Alternative I</b>	Base:	Base wax with heat on the base
	Kick:	Spread 2-3 layers of Synthetic Blue (-2°...-6°C) on the base
	Top:	2 layers of Tar Red (0°...-3°C) kick wax

Hard track

<b>Alternative II</b>	Base:	Base wax with heat on the base
	Kick:	RF Blue (-4°...-10°C) 3-4 layers

**Start note:** Synthetic Blue and Red MFW can be mixed and heated with iron. Let cool without any finishing.

## New snow -6°... -12°C

### GLIDE WAXING

**Alternative I**    Base:            LF08 low fluorinated wax  
                          Glide:            HF70 High fluor glider  
                          Top:              SFR75 fluor powder

**Alternative II**    Base:            BWLF low fluor glider  
                          Glide:            HF70 High fluor glider  
                          Top:              SF10/SF30 fluor powder

Base structuring: Start "Bruce" nr.5

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### KICK WAXING

**Alternative I**    Base:            Base wax mixed with Synthetic Purple (-1°...-3°C) with heat on the base  
                          Kick:            Spread good layer of Synthetic Blue (-2°...-6°C) on the Base. On the top lay some good layers of Blue MFW (-3°...-10°C). Heat the mixing with iron and let cool down. Smoothen outside with cork.

**Start note:**      Spread one thin layer of Tar Blue (-2°...-6°C) kick wax on the top to prevent friction.

## New snow -12°... -15°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	LF08-low fluorinated Glider
	Glide:	HF80 high fluorinated Glider
	Top:	SFR92-fluor block ironed threw fibertex or SFR75 fluor powder ironed

**Start note:** If the snow is very dry, break the gliding surface slightly by using Brass or steel brush beginning from tip to tail. Smooth polishing with nylon powder or finishing brush.

## KICK WAXING

<b>Alternative I</b>	Base:	Base wax mixed with Synthetic Blue (-2°...-6°C) heated with iron on the base
	Kick:	Spread good layer of Synthetic Blue (-2°...-6°C) on the Base. Cover with some good layers of Blue MFW (-3°...-10°C). Iron the waxing, let cool down and smoothen outside with cork.

<b>Alternative II</b>	Base:	Base wax and Synthetic Blue (-2...6C)mixed and heated together on the base.
	Kick:	Synthetic Green (-5...-10C) 3-4 layers
	Top:	Outside 2 thin layers of Tar Green (-7...-12C) kick wax.

## New snow -15°... -25°C

### GLIDE WAXING

<b>Alternative I</b>	Base:	LF08-low fluorinated Glider
	Glide:	HF80 high fluorinated Glider
	Top:	SFR92 fluor block

**Start note:** If the snow is very dry, break the gliding surface slightly with a Brass or steel brush beginning from tip to tail. Smooth polishing with nylon powder or finishing brush. If temperature is warming use as Top SFR99 fluor block.

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### KICK WAXING

<b>Alternative I</b>	Base:	Base wax mixed with Synthetic Blue (-2°...-6°C). Heated with iron on the base
	Kick:	Spread 3 – 4 layers of Synthetic Green (-5°...-10°C) on the Base
	Top:	Cover with 2 thin layer of Tar Green (-7°...-12°C) outside on the top

## Old snow +10°... +3°C

## GLIDE WAXING

Alternative I	Base:	BM6 molybdenum fluor glider
	Glide:	n2 nano glider
	Top:	n5 nanofluor powder and n1 nanofluor liquide.
Raining		
Alternative II	Base:	LF08 low fluor glider
	Glide:	HF20 high fluor glider
	Top:	BM7 molybdenum fluor powder or SFR40 fluorpowder

## KICK WAXING

Alternative I	Base:	Base klister heated on the base
	Kick:	Red klister and Universal Wide klister mixed 50/50. Mix some drops MFW Yellow (+10°...+1°C) klister on the waxing.
Alternative II	Base:	Base klister heated on the base
	Kick:	Thin layer of Special klister (+2°...-2°C). On the topLayer of Universal Plus.

# Old snow +3°... +1°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	BM6 molybdenum fluor glider
	Glide:	n2- nano fluor Glider
	Top:	n1-nano liquid + n5 nano powder ironed together

Base structuring: Start Structure Tool roll "Straight" number 300, and on the top roll "Spruce" number 30

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## KICK WAXING

<b>Alternative I</b>	Base:	Base Klister heated with iron
	Kick:	Spread Red - klister ja Universal - Wide klister mixed 50/50. Add some Yellow MFW ( +10°...+1°C ) klister in the waxing

<b>Alternative II</b>	Base:	Base Klister heated with iron
	Kick:	Universal Plus Klister. For long distances Special Klister thinly under the Universal Plus Klister.

**Start note:** Increasing the share of Red –klister the grip will be more aggressive

## Old snow 0°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	BM6 molybdenum fluor glider
	Glide:	n4 nano fluor Glider
	Top:	n1-nano liquid + n5 nano powder ironed together

Base structuring: Start Structure Tool roll "Straight" number 300 and roll "Spruce" number 10 on the top for classic skiing. For skating roll "Spruce" number 10

## Rain/fleet snowing

<b>Alternative II</b>	Base:	BWLF lowfluor glider
	Glide:	n4 nano fluor glider
	Top:	n9 nano block and n5 nano powder ironed together

## KICK WAXING

<b>Alternative I</b>	Base:	Spread Base Wax Extra with heat on the base
	Kick:	Thin layer of Special- klister (+2° ... -2°C), Mix some (3-5) drops of Universal Wide klister on the both sides of the groove. Smoothen well, the Universal klister will rise on the top
	Top:	Grip will be covered outside with Tar Zero ( +½° ... -½°C ) kick wax

## Hard Track

<b>Alternative II</b>	Base:	Extra base ironed on the Base
	Kick:	RF Yellow (+3...+1C) hard wax 3-5 layers. Smoothen well!

**Start note:** If the kick is not good enough, add some drops of Universal Plus klister on the top

## Old snow 0°... -1°C

### GLIDE WAXING

**Alternative I**    Base:            BM6 molybden fluor glider  
                          Glide:            n4 nano fluor glider  
                          Top:              n9 nano fluor block, n5 nano powder ironed together. On the top n3 nano liquide.

**Alternative II**    Base:            LF08 low fluorinated Glider  
                          Glide:            HF40 and BM4 mixed 70/30  
                          Top:              SFR40 - fluoripowder

Base structuring: Start Structure Tool roll "Spruce" number 10

**Start note:**        BMR9 molybdenum fluor -, SFR400 Sprint-liquid or SFR99 fluor block can be used on the top of BM and HF – gliders in Sprints and short distances.

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### KICK WAXING

**Alternative I**    Base:            Extra Base wax heated with iron  
                          Kick:             RF Violet (+2...-2C) hard wax 3-4 layers.

**Start note:**        If more grip is needed you can mix RF Violet and RF Yellow hard wax together.



## Old snow -1... -3°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	LF08 low fluorinated Glider
	Glide:	HF40 and BM4 mixed 70/30
	Top:	SF30 – fluor powder
<b>Alternative II</b>	Base:	BM6 molybdenum Fluor Glider
	Glide:	n6 nano fluor glider
	Top:	n9 nano block and n5 nanopowder ironed together

Base structuring: Start Structure tool roll "Spruce" number 10

## KICK WAXING

<b>Alternative I</b>	Base:	Base Wax with heat on the base
	Kick:	2 – 3 layers of Synthetic Purple (+1°...-3°C) kick wax.

Soft track

<b>Alternative II</b>	Base:	Base wax heated with iron on the base
	Kick:	RF Violet (+2°...-2°C) hard wax 3-5 layers. On the top thin layer of RF Red (-1°...-5°C) hard wax.

**Start note:** BM (+2°...-30°C) -covering can be added on the top of kick waxing

## Old snow -3°... -6°C

### GLIDE WAXING

**Alternative I**    Base:            LF08 low fluorinated Glider  
                           Glide:            HF60 high fluorinated Glider  
                           Top:              SFR30 or SFR60 fluor powder ironed and on the top SFR99 fluor block cold applied

**Alternative II**    Base:            BM6 Molybdenum Fluor Glider  
                           Glide:            n6 nano fluor glider  
                           Top:              n9 nano block and n7 nano powder ironed.

Base structuring: Start Structure Tool roll "Spruce" number 10 for classic skiing

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### KICK WAXING

**Alternative I**    Base:            Base wax with heat on the base  
                           Kick:            RF Blue (-4°...-10°C) and RF Red (-1°...-5°C) hard wax 4-5 layers alternately. Blue on the top.

Soft Track

**Alternative II**    Base:            Base wax with heat on the base  
                           Kick:            Good layer of Synthetic Blue (-2°...-6°C) kick wax  
                           Top:              Good layer of fluorinated BM – coating. Iron the waxing, let cool and smooth with cork

**Start note:**        3-5 layers of Synthetic Purple (+1°...-3°C) kick wax is worth of trying

## Old snow -6... -10°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	HFG high fluorinated graphite
	Glide:	n6 nano fluor - Glider
	Top:	n7 nano fluor – powder or SFR75 fluor powder
<b>Alternative II</b>	Base:	LF08 low fluorinated Glider
	Glide:	HF80 high fluorinated Glider
	Top:	SFR99 - fluor block with rubbing on the base, add on the top SF30 -fluor powder hot ironed

Base structuring: Start Structure tool roll "Spruce" number 10 for classic

## KICK WAXING

<b>Alternative I</b>	Base:	Base wax with heat on the base
	Kick:	Synthetic Blue (-2°...-6°C) kick wax 2 –3 layers
	Top:	Blue MFW (-3°...-10°C) kick wax one layer

**Start note:** As kick it is worth to try 3 – 5 layers of Synthetic Blue (-2°...-6°C) alone

## Old snow -10°... -15°C

### GLIDE WAXING

<b>Alternative I</b>	Base:	LF08 Low fluor glider
	Glide:	HF80 high fluorinated Glider
	Top:	SFR75 fluor powder
<b>Alternative II</b>	Base:	HFG high fluorinated graphite
	Glide:	LF08 low fluorinated Glider
	Top:	SFR75 fluor powder

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### KICK WAXING

<b>Alternative I</b>	Base:	Base wax heated with iron on the base
	Kick:	Good layer of Synthetic Blue (-2°...-6°C)
	Top:	Blue MFW (-3°...-10°C) good layer on the top heated with iron

**Start note:** As kick waxing it is worth to try 3 – 5 layers of Synthetic Blue (-2°...-6°C) alone.

# Old snow -15... -25°C

## GLIDE WAXING

<b>Alternative I</b>	Base:	HFG high fluorinated graphite
	Glide:	HF80 high fluorinated Glider
	Top:	SFR92 fluor block
<b>Alternative II</b>	Base:	SG6 Glider
	Glide:	LF08 low fluorinated Glider
	Top:	SFR75 fluor powder

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## KICK WAXING

<b>Alternative I</b>	Base:	Base wax and Synthetic Blue (-2°...-6°C) heated with iron
	Kick:	3 – 4 layers of Synthetic Green (-5°...-10°C)

**Start note:** If snow has been very cold long time, the Synthetic black (-10°...-30°C) can be tried as a thin layer applied outside and cold. For kick wax it is worth to try 3 – 5 layers of Synthetic Blue (-2°...-6°C) alone.

## Coarse snow +10°... +1°C

### GLIDE WAXING

**Alternative I**    Base:            BM6 molybdenum fluor Glider  
                          Glide:            n2 nano fluor glider  
                          Top:              n1-nano liquid + n5 nano powder ironed together. On the top n1 – nano liquid

Dirty snow

**Alternative II**    Base:            SG8 Glider  
                          Glide:            BM2 molybdenum fluor -Glider  
                          Top:              BM7 fluor -powder or SFR40

Base structuring: Start Structure Tool roll "Straight" number 300 and roll "Spruce" number 30 on the top

### KICK WAXING

**Alternative I**    Base:            Base Klister with heat on the base  
                          Kick:            Red Klister and Universal - Wide Klister mixed 50/50. Add some Yellow MFW (+10°...+1°C) Klister to the waxing

Dirty snow

**Alternative II**    Base:            Base Klister heated with iron  
                          Kick:            Universal Plus– Klister  
                          Top:              Some drops of BM – Klister will be added and rubbed in to the waxing

**Start note:**        Universal Plus-Klister can be added to get kick more aggressive

## Coarse snow +1°... 0°C

## GLIDE WAXING

**Alternative I** Base: BM6 molybdenum fluor Glider  
 Glide: n2 nano fluor glider  
 Top: n1-nano liquid + n5 nano powder ironed together

Dirty snow

**Alternative II** Base: SG8 Glider  
 Glide: BM2 molybdenum fluor- Glider  
 Top: BM7 fluor -powder or SFR40

Base structuring: Start Structure Tool roll "Straight" number 300, on the top roll "Spruce" number 30

**Start note:** For Sprints and short distances BMR9 molybdenum fluor –liquid can be used instead of powder.

## KICK WAXING

**Alternative I** Base: Base Klister with heat on the base  
 Kick: Yellow MFW – Klister (+10°...+1°C) and Universal - Wide Klister mixed 50/50

Dirty snow

**Alternative II** Base: Base Klister with heat on the base  
 Kick: Special – Klister (+2°...-2°C) and Universal Wide – Klister mixed 50/50  
 Top: Add some drops of BM–Klister and rub on the waxing

**Start note:** Yellow MFW –Klister can be added to get kick more aggressive





## Coarse snow -1°... -4°C

## GLIDE WAXING

**Alternative I** Base: BM6 molybdenum fluor Glider  
 Glide: n4 nano fluor glider  
 Top: n5 nano powder

**Alternative II** Base: BM6 molybdenum fluor Glider  
 Glide: BM4 and HF40 mixed 30/70  
 Top: SF30 or SFR60 fluor powder. On the top BMR9 molybdenum fluor-liquid

Base structuring: Start Structure Tool roll "Spruce" number 10

**Start note:** In Sprints and shorter distances BMR9 molybdenum fluor-liquid or BMRS molybdenum fluor block can be used as top finishing

## KICK WAXING

**Alternative I** Base: Extra Base wax with heat on the base  
 Kick: RF Red (-1°...-5°C) hard wax 3-4 layers. On the top thin layer of RF Violet (+2°...-2°C).

Dirty snow

**Alternative II** Base: Extra Base wax with heat on the base  
 Kick: 3 - 4 layers of Synthetic Purple (+1°...-3°C)  
 Top: 1 - 2 layers of BM - cover (+2°...-30°C)

**Start note:** If the kick is not aggressive enough, Violet Klister can be added on the top to get better kick



## Coarse snow -10°... -25°C

## GLIDE WAXING

**Alternative I**    Base:            BM 6 Molybdenum fluor Glider  
                           Glide:            HF80 high fluorinated Glider  
                           Top:                SFR75 fluor powder

**Alternative II**    Base:            LF08 low fluorinated Glider  
                           Glide:            BM6 molybdenum fluor Glider  
                           Top:                SFR92 fluor block heated with iron threw fibertex

Base structuring: Start Structure Tool roll "Spruce" number 10 for classic skiing

**Start note:**        In Sprints and shorter distances BMR5 molybdenum fluor block can be used as a top finishing

## KICK WAXING

**Alternative I**    Base:            Extra Base wax with heat on the base  
                           Kick:             Spread good layer of Synthetic Blue (-2°... - 6°C), on the top good layer of Blue MFW (- 3°... -10°C). Waxing ironed, cooled and smoothed with cork.

**Start note:**        As kick waxing it is worth to try mixing of the Base wax and Synthetic Blue heated with iron



## Icy snow -2°... -8°C

## GLIDE WAXING

**Alternative I**    Base:            LF08 low fluorinated Glider  
                          Glide:            BM6 molybdenum fluor Glider  
                          Top:              SF30 and BM7 fluor powders mixed 50/50

**Alternative II**    Base                HFG- fluor graphite glider  
                          Glide:            n6 and BM6 gliders mixed 70/30%.  
                          Top:              n7 nano powder

Base structuring: Start Structure Tool roll "Spruce" number 10 for classic skiing

**Start note:**        In Sprints and shorter distances BMR5 molybdenum fluor block can be used as a top finishing. For longer distances SG9 hardener powder can be added to increase durability of the powder waxing

## KICK WAXING

**Alternative I**    Base:            Extra Base wax heated with iron  
                          Kick:            BM-klister

**Start note:**        If kick is too sticky, thin layer of BM-coating can be added







## Waxing guide for XC skiing

Price 4€

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