Waxing guide for XC skiing

www.startskiwax.com
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1. Safety instructions

Different fluoro combinations are starting to be used as wax raw materials. 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. Normally familiar and well known trade mark ensures quality and safety for use.

Follow the instructions 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 clearance of 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 scratchs and refreshes the structuring for the bases. Base waxing is always 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 moisturized too. Exception 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 abrasive and coarse-grained.

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:

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<th>AIR HUMIDITY</th>
<th>10</th>
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<th>30</th>
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<td>SG</td>
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<td>Old, coarse-grained snow</td>
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<td>Coarse, dirty and man made snow</td>
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If the track is made of man made snow, it consists more moisture than nature snow and is more abrasive and coarse-grained.
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 silicones or any other additives. This makes them to suit well as base gliders under the fluorinated waxes.

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

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

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

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)

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
- HF6 fluor graphite
- HF20 white (+10°...0°C)
- HF40 red (0°...-3°C)
- HF60 purple (-2°...-7°C)
- HF80 green (-7°...-25°C)
START Black Magic (BM)-molybdenum/fluor gliders

START BM-gliders 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)

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

Rh 55% ...75%

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-gliders
- Start HFG fluographite 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 absorbate 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 enhances 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 blocks (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)

Fluor block cold application:

1. Apply fluor block 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.

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)

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-gliders.

**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-gliders, but it is possible to use it with other HF-gliders as well.

Start n7/n7 -nano-flour powder is produced to work in colder conditions with n4- and n6-gliders. For temperatures just below 0°C-degree choose n4-glider. In colder conditions use n6-glider with n7-powder.
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 fluori 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 ground with fine stone grind structures. 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 harder 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.
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. Klisters

There are different types of klisters in Start wax collection:

- Base klister
- Start klisters
- Specialty klisters
- Molybdenium/fluor klisters

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

Klisters are used for grip wax when the track is extremely icy or wet. Klisters 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 klisters 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! Klisters 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 Klisters:
- Red
- Special (+2 °C ...-2 °C)
- Purple (0 °C ...-5 °C)
- Blue (-4 °C ...-15 °C)

MFW Klisters:
- Yellow (+10 °C ...+1 °C)
- Red (+1 °C ...-5 °C)
- BM white (+10 °C ...-10 °C)
11. Waxing with Klisters

1. Clean the grip zone of the ski. When using klisters, 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 its 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 covering layer. Apply to the cooled surface using the appropriate directions. **Note!** Finished klister wax base should not be touched with your hands!!
New Snow +3°C...+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.
## GLIDE WAXING

**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.

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## KICK WAXING

### 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%**

**Alternative I**
- **Base:** BWLF low fluorinated base wax
- **Glide:** n4 nano fluorinated glider
- **Top:** n5 nano fluoro powder

**Snowing**
- **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.

**KICK WAXING**

**Alternative I**
- **Base:** Base wax with heat on the base
- **Kick:** RF-yellow (+3...+1)C 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%

Alternative I
Base: BVLF low fluorinated base wax
Glide: n4 nano fluorinated glider
Top: n5 nano fluor powder

Snoing
Alternative II
Base: BVLF 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

Alternative I
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

Alternative II
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...-%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

Alternative I
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

Alternative I
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
Alternative II
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

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.
Waxing examples

New snow -12°... -15°C

GLIDE WAXING

Alternative I  
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

Alternative I  
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.

Alternative II  
Base: Base wax and Synthetic Blue (-2...6°C) mixed and heated together on the base.  
Kick: Synthetic Green (-5...-10°C) 3-4 layers  
Top: Outside 2 thin layers of Tar Green (-7...-12°C) kick wax.
New snow -15°...-25°C

GLIDE WAXING

Alternative I  
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.

KICK WAXING

Alternative I  
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 top Layer of Universal Plus.
Old snow +3°C... +1°C

GLIDE WAXING

Alternative I
Base: BM6 molybdenum fluoro glider
Glide: n2- nano fluoro Glide
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

KICK WAXING

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

Alternative II
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
## Waxing examples

### Old snow 0°C

#### Glide waxing

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<td>Top:</td>
<td>n9 nano block and n5 nano powder ironed together</td>
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### Kick waxing

#### Alternative I

| Base: | Spread Base Wax Extra with heat on the base |
| Kick: | Thin layer of Special- klister (+2°C...-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°C...-½°C ) kick wax |

#### Hard Track

| Base: | Extra base ironed on the Base |
| Kick: | RF Yellow (+3...+1°C) 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
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 - fluoripower

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.

KICK WAXING

Alternative I
Base: Extra Base wax heated with iron
Kick: RF Violet (+2...-2°C) 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

Alternative I  
Base: LF08 low fluorinated Glider  
Glide: HF40 and BM4 mixed 70/30  
Top: SF30 – fluor powder

Alternative II  
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

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

Soft track  
Alternative II  
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: SF30 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

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

Alternative I
Base: HFG high fluorinated graphite
Glide: n6 nano fluor - Glider
Top: n7 nano fluor – powder or SFR75 fluor powder

Alternative II
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

Alternative I
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

Alternative I
Base: LF08 Low fluor glider
Glide: HF80 high fluorinated Glider
Top: SFR75 fluor powder

Alternative II
Base: HFG high fluorinated graphite
Glide: LF08 low fluorinated Glider
Top: SFR75 fluor powder

KICK WAXING

Alternative I
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

Alternative I
Base: HFG high fluorinated graphite
Glide: HF80 high fluorinated Glider
Top: SFR92 fluor block

Alternative II
Base: SG6 Glider
Glide: LF08 low fluorinated Glider
Top: SFR75 fluor powder

KICK WAXING

Alternative I
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 0°...-1°C

GLIDE WAXING

Alternative I
- Base: BM6 molybdenum fluor Glider
- Glide: n4 nano fluor glider
- Top: n5 nano powder and n3 nano liquid

Dirty snow
Alternative II
- Base: LF08 low fluorinated 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 10

Start note: For Sprints and short distances BMR9 molybdenum fluor–liquid or BMR5 fluor block as Top

KICK WAXING

Alternative I
- Base: Base Klister with heat on the base
- Kick: Red MFW –Klister (+1°...-5°C) and Special– Klister (+2°...–2°C) mixed 50/50

Dirty snow
Alternative II
- Base: Base Klister with heat on the base
- Kick: Universal Wide –Klister and BM –Klister mixed 50/50

Start note: Red 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 BMR5 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 -4°... -10°C

GLIDE WAXING

Alternative I
Base: HFG fluor Glider
Glide: n6 nano fluor glider
Top: n7 nano powder

Alternative II
Base: LF08 low fluorinated Glider
Glide: BM6 molybdenum fluor Glider
Top: SF30 or SFR60 fluor powder. On the top BMR5 molybdenum fluor block applied

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

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 to the base
Kick: RF Blue (-4...-10C) hard wax 3-4 layers.

Start note: As kick waxing it is worth to try mixing of the Base wax and Synthetic Blue ironed together
Waxing examples

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 BMRS 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 0°... -2°C

GLIDE WAXING

Alternative I
Base: LF08 low fluorinated Glider
Glide: BM4 molybdenum fluorinated and n4 nanofluor-glider mixed 50/50
Top: n9 nano block, n5 nano powder ironed. On the top n3 nano liquid.

Dirty snow
Alternative II
Base: LF08 low fluorinated Glider
Glide: BM4 molybdenum fluor Glider
Top: BM7 molybdenum flour powder and on the top BMR9 molybdenum flour –liquid

Base structuring: Start Structure Tool roll “Spruce” number 10

Start note: In Sprints and shorter distances BMR9 Molybdenum flour –liquid or BMR5 molybdenum flour block can be used as top finishing

KICK WAXING

Alternative I
Base: Base Klister with heat on the base
Kick: Red MFW – Klister (+1°...-5°C) and Violet-Klister (0°...- 5°C) mixed
Top: As top thin layer of BM – coating (+2°...-30°C) outside
**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 encrease durability of the powder waxing

**KICK WAXING**

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

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

KICK WAXING
Waxing guide for XC skiing

Price 4€