

A Waxed Ski is a Happy Ski

Web page were I found my information:

http://www.rideandglide.bizland.com/wax_101.htm

Edited from: Steve Thatcher

Why Glide Wax?

- a) Glide waxing adjusts the physical properties of the ski base allowing it to glide as fast as possible.
- b) Skis are slowed down by two factors: Friction and Suction.
 - Friction is determined by how hard the ski base is relative to the snow surface and how much weight is on each part of the ski.
 - Suction is a function of how much water is under the ski.
 - Water develops due to the friction of the ski gliding over the snow.
 - The lower the friction and the lower the suction the faster the ski glides.
 - Snow crystals will dig into the bottom of the ski and cause friction which slows the ski down.
 - We can make the ski base harder by putting hard wax into the base. A ski base is porous. It will absorb wax and it's hardness will change depending on the hardness of the wax we put in it.
 - Wax manufacturers have determined how hard a wax is needed for a given temperature. Thus we select a wax for the expected snow temperature and apply it. The colder the snow the harder the wax. The warmer the snow the softer the wax.

At temperatures above about 15F the skis are gliding on a thin film of water. This water is created by the friction of the ski melting the snow. This is wet friction. The different waxes try to manage the production of water to produce optimum glide. Too much water and you get suction and the ski slows down. Too little water (dry friction) and the ski slows down. Dry friction conditions are generally slower than wet friction conditions. At temperatures below 15F you can't make enough friction to create any water. Under these conditions the smoother and harder the ski base the better the glide. That's why we put on hard wax, have minimal structure and polish the bases when it's very cold. So the simple rule is hard waxes for cold temps, soft waxes for warm temps. The extra water problems caused by warm or wet snow are handled by using fluoro waxes which repel water, similar to the way water beads up on a waxed car. By repelling water the suction is reduced. Ski structure can be more important than wax when dealing with wet snow.

Base Prep

New skis or skis that have been just stoneground have no wax in the base. They need to be waxed and scraped several times before they will attain their glide speed potential.

- Melt the base prep wax on your skis.
- Make sure to put a thick layer of wax.
- Smooth out with an iron and let cool for 20-30 minutes.
- Set upside down to let wax soak in
- Scrape off
- Repeat at least 5 times.
- After the last time finish off the job by brushing.
- Next progress to a wax that you will ski on. Rex Blue for average conditions.
- Rewax after each ski.

- The skis get faster by waxing and skiing as opposed to just waxing over and over again.

Skate waxing

There are several steps required in glide waxing.

1) Clean the ski

- a) Brush the base with a brass brush from tip to tail.
 - this opens up the pores in the base
 - it removes any dirt that might be impregnated in the base.
- b) Purge waxing.
 - A soft wax is melted on to the base and ironed in then scraped off while still warm.
 - This pulls old wax and dirt out of the base.
 - White nylon brush to remove as much of the soft wax as possible.
 - Do this before races, after klister races or if the snow is really dirty.

2) Add structure

If you don't have a structure already stoneground into the base you can add structure here by using a riling tool. If the weather is going to be around freezing this is a good idea. If you don't have a riling tool don't worry about it. Your skis will be slower than they otherwise might be but so will most other people's.. It's best to have this procedure demonstrated to you so watch someone do it sometime.

3) Hot wax the ski

- a) Touch the bar of wax to the bottom of the iron and then quickly rub the bar on the base of the ski.
- b) Swirl the bar on the iron a bit to get more wax to melt and smear it on the ski base.
- c) As the bottom of the iron loads up with wax and starts to drip do a little ironing several times down the ski to capture the wax that's on the bottom of the iron.
- d) Work your way down the ski on both sides of the groove.
- e) Now start ironing the ski. Keep the iron moving so as to spread out the wax and not to over heat the ski.
- f) Don't let the wax smoke. If it smokes turn the iron down. It will probably smoke a bit when touching the wax bar to the iron, but will be ok when ironing the ski. Keep working until the entire ski is coated with wax.
- g) Let cool for 20-30 mins.

4) Scrape

- a) After the ski has cooled scrape the grooves first.
- b) Then scrape the rest of the ski. Start from the tip with the scraper tilted away from you. Push the scraper down the ski with your fingers on the top of the scraper and your thumbs at the bottom.
- c) Make one pass and then come back and clean up what you missed. Keep the scraper clean by scraping it with another scraper. The goal is to remove all the wax from the surface. You ski on wax in the base not on it.
- d) The scraper will not get all the wax off the base. The remainder is removed by brushing.

5) **Brush**

- a) Using a white nylon brush make short (1-2 feet) firm strokes as you move from tip to tail. You should see wax powder coming off the ski as you brush.
- b) Periodically clean the brush by rubbing a scraper over it to remove the loose wax particles. You may want to wear a dust mask depending on how much wax dust you create. Make at least three passes with the nylon brush.
- c) If the wax is a warm wax like Swix yellow you may be done. Harder waxes need the horsehair brush to get the last bit off. Use the same procedure as before. You're done when you don't see any more dust coming off the ski.
- d) Nylon bristles are bigger and remove the bulk of the wax. The horsehair bristles are smaller and stiffer and remove the rest of the wax. Horsehair is good for removing the wax from the structure pattern.

10) **Ski Storage**

At the end of the season or any time you will not be using a pair of skis for an extended period. Do a complete glide wax job with a single layer of wax but don't scrape it off. Store the skis in a bag leaving the wax on the ski. This prevents the ski base from oxidizing and come next year all you have to do is scrape off the wax, brush and go skiing.