

## Question about glide waxing colder than conditions indicate

With the recent warmer spell, I've had a question about whether it's such a bad thing to have slightly colder glide wax on than what the conditions indicate. You'll recall in an earlier article that I indicated that the fit and match of the ski to the skier and conditions are the most important determinants of how well a pair of skis glide and perform. If you have an unlimited budget you should be looking at about five to 7 pairs of skis to match the conditions.

1. The first priority is a medium hard wax/soft klister ski (classic). These would be for hard packed, fresh to older snow to abrasive snow; or soft track and klister conditions. These can be used for binder/hard wax conditions as well as klister conditions and have a short, slightly stiff wax pocket.
2. Hard track (skating) is priority 2. For hard packed trails. This is a very stiff ski in the middle section (should not be able to close the camber with your body weight) with tips and tails not too stiff so it does not create pressure points and drag.
3. Soft powder ski (classic). Priority 3 or 4 depending on which conditions you encounter more. For new snow around zero degrees, with glazy fresh snow and loose track. This ski should have a long(er) gradual wax pocket at the front and is too stiff if it requires more than 5 or 6 layers of grip wax.
4. Klister ski (classic). Priority 3 or 4 (see 3 above). For very hard tracks, dirty snow, classic klister conditions. This ski should have a short, stiff wax pocket (compared to above classic skis)
5. Soft track skating skis. Priority 4 or 5 depending on whether you skate or classic more. For loose powder or slush. This ski is soft in the first camber, stiff in the middle third and has a softer tip and tail for floating over loose, deformed snow.

Next in importance is the grind or structure that the skis have (review my articles on that). From that you can see that the grind pattern or structure, for instance, on the soft track skating skis would be different for the loose powder conditions (colder temperatures, therefore less free moisture therefore less aggressive grind pattern or structure) than for the slush conditions where there is a lot of free moisture which requires an aggressive grind pattern and lots of structure. So you really should have a two pairs of dedicated soft track skating skis with dedicated grind patterns for both those conditions so you don't have to mess around with that when conditions change. Plus another pair of skis for slushy klister conditions similar to the soft powder skis except that the wax pocket is slightly higher so the klister stays off the snow until needed. Remember there is no ski that is optimal in all conditions (or grinds/structures that are optimal in all conditions and a mistake often made is to have the same grind in all your skis - you need to specialize!)

Now, if you have the right pair of skis for you and the conditions then having a glide wax that is slightly colder than indicated conditions is not so much of a disaster. Warmer glide waxes are softer and have additives that are hydrophobic to help repel moisture while colder glide waxes are harder so the snow crystals don't penetrate and have additives that help in gliding and overcoming dry friction. The enemies of glide are dry friction, snow suck (when there is too much moisture) and mechanical friction (uneven ski bases, abrasions, base fiber hairs etc.) Depending on snow conditions, any one of the three may play a greater role. So if your glide wax is only slightly colder than indicated conditions then it's not such a big deal. If, however, you've got a lot of free moisture around and snow suck becomes significant, then that hydrophobicity characteristics of the softer glide wax will take precedence (after choosing the correct ski and then the correct grind or structure). So unless the differences in temperature and snow conditions are extreme (very cold or very warm with free moisture) then having a slightly warmer or colder glide wax is not as important as having the right ski in the first place.