How Much Paste?

Posted by wickededge - 19 Jul 2012 19:20

The way the paste works on the strops for knife sharpening is fascinating and has been much discussed in other threads, so in this post, I'm just going to kick off the conversation about how much paste to apply and how often. There are essentially three different actions that the strops perform:

1. Abrading
2. Honing
3. Burnishing

The amount of paste on the strops will directly affect the ratio of burnishing:abrading, honing:abrading, honing:burnishing. I've found that I don't need a whole lot of paste to get my ideal ratio going. My preference for stropping is a to have the ratio weighted more heavily toward burnishing and honing. When the strop is burnishing well, it's also honing well. This happens when there is considerable "stiction" between the leather and the metal which occurs when there is enough paste to create a tight seal between the metal and leather, but not so much that the paste begins to lubricate. Having more heavily pasted strops will give you more abrasion and less burnishing and honing. I start out a fresh set of strops with the equivalent of a thin bead about 1" long shared between the two strops. I work that in by rubbing the strops together, working the paste in as well as I can. If I'm patient enough, I'll let the paste dry. From there, I'll use the strops a lot until they start to get tacky. If they don't get tacky after a lot of stropping, I'll apply just a little more paste and repeat the process. Once the strops are tacky feeling against the blade, they're just right for my taste. I usually only reapply the paste after 50-100 knives and only then just a little.

Please share your thoughts and experiences on applying and reapplying the paste.

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Re: How Much Paste?

Posted by StevenPinson - 20 Jul 2012 11:47

Clay,

I have found from doing sample buttons for thermal spray (on a Beuhler wheel) that "IF" you just agitate the plate paste carrier with a clean toothbrush and a little DI water you can get alot more mileage from the paste. I do not see why this would not work on a balsa or leather strop as well.

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Re: How Much Paste?
Posted by wickededge - 20 Jul 2012 12:57

Steve,

Do you mean agitating the leather or balsa prior to applying the paste?

StevenPinson wrote:

Clay,

I have found from doing sample buttons for thermal spray (on a Beuhler wheel) that "IF" you just agitate the plate paste carrier with a clean toothbrush and a little DI water you can get alot more mileage from the paste. I do not see why this would not work on a balsa or leather strop as well.

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Re: How Much Paste?
Posted by StevenPinson - 20 Jul 2012 13:04

Clay,

Either or ... the trick is to increase the surface area of the carrier. Before use gives more area for the paste to be spread out on and the "after use/application" allows the residual paste to be rejuvinated by the increase in area as well.

NOTE: A suede carrier might be a wonderful thing for stropping with paste.

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Re: How Much Paste?
Posted by wickededge - 20 Jul 2012 13:34

StevenPinson wrote:

Clay,

Either or ... the trick is to increase the surface area of the carrier. Before use gives more area for the paste to be spread out on and the "after use/application" allows the residual paste to be rejuvinated by the increase in area as well.

NOTE: A suede carrier might be a wonderful thing for stropping with paste.

I get what you mean now - I've done what you're describing with a wire brush and it definitely allows loading more abrasive. The drawback for me is that when the leather surfaces is interrupted, there is less "stiction" so I get less of the burnishing affect and more abrading. I think that the brush method is perfect if you want to tightly control the micro-teeth you're creating with the strops.

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Re: How Much Paste?

Posted by KenBuzbee - 20 Jul 2012 15:06

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I know what you're talking about, Clay. I go for the same action with my paddle strop.

As an aside, the "normal" motion is very touchy with the strops. Second knife and I've already nicked one.... I was trying to always go up but it isn't that easy when moving along the edge. Maybe I should just go straight up, and not try to go along the edge?

Ken

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Re: How Much Paste?

Posted by wickededge - 20 Jul 2012 15:16

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As long as you're moving more upward than parallel, you should be alright. You don't need to hit the whole length of the blade with one stroke, so multiple mostly up and slightly forward strokes, progressing down the length of the blade should be fine.

KenBuzbee wrote:

I know what you're talking about, Clay. I go for the same action with my paddle strop.

As an aside, the "normal" motion is very touchy with the strops. Second knife and I've already nicked one.... I was trying to always go up but it isn't that easy when moving along the edge. Maybe I should just go straight up, and not try to go along the edge?

Ken

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Re: How Much Paste?
Posted by KenBuzbee - 20 Jul 2012 15:32

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wickededge wrote:

so multiple mostly up and slightly forward strokes, progressing down the length of the blade should be fine.

So I'm learning, Clay... It'll come... Regardless, the edge came out great. Unfortunately, I don't think there's anything to cut in tonight's dinner (salmon on the grill and the cabbage is already roasted)

Cheers,

Ken

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Re: How Much Paste?
Posted by PhilipPasteur - 23 Jul 2012 09:33

Hi Clay,

I have always tryed to get just enough compound on the media so that is slides easily along the blade. My thought is that the abrasive is doing the work and at this point more strokes with a light touch will get the finest edge. Conceptually I am just trying to refine the edge with the finer abrasives. This sort of substitutes for honing, because, in theory, I am straigtening the edge bu controlling the angle and using the abrasive to do the work. If I put enough compound on the strop so that it grabs the blade, I have been taking some off until it is nice and smooth. In light of what you are saying, maybe this is counterproductive.

As for your third elemant of stropping, I still have a hard time understanding how we are getting any burnishing with leather on hardened steel. I mean, the plastic flow of metal due to pressure being caused by leather sliding over the metal is hard for me to grasp as a concept.

You mentioned that you were doing some work with a person at Sandia National labs on this concept. Have you got anything new to share on it? I would love to be proven wrong on this, giving me another area to try to perfect.

Anyway, my stropping is doing something. I can "feel" the difference in the edge after the stones and between each grade of abrasive. Even the 0.025 micron abrasive on nanocloth makes a noticeable difference in the sound and ease of push cutting and the feel of the edge on my thumb...and especially in shaving. These strops slide across the blade with almost no resistance.

I may have to load some strops up, pump up the stiction factor and see what I get...

Phil

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Re: How Much Paste?

Posted by wickededge - 23 Jul 2012 10:31

PhilipPasteur wrote:

Hi Clay,

I have always tryed to get just enough compound on the media so that is slides easily along the blade. My thought is that the abrasive is doing the work and at this point more strokes with a light touch will get the finest edge. Conceptually I am just trying to refine the edge with the finer abrasives. This sort of substitutes for honing, because, in theory, I am straigtening the edge bu controlling the angle and using the abrasive to do the work. If I put enough compound on the strop so that it grabs the blade, I have been taking some off until it is nice and smooth. In light of what you are saying, maybe this is counterproductive.

I think your approach is very good, continuing to abrade the edge with ever finer abrasives should refine the edge more with each phase.

PhilipPasteur wrote:

As for your third elemant of stropping, I still have a hard time understanding how we are getting any burnishing with leather on hardened steel. I mean, the plastic flow of metal due to pressure being caused by leather sliding over the metal is hard for me to grasp as a concept.

You mentioned that you were doing some work with a person at Sandia National labs on this concept. Have you got anything new to share on it? I would love to be proven wrong on this, giving me another area to try to perfect.

We haven't gotten too far with the lab yet, they have a very specific schedule for this type of assistance and I missed the spring window. In the meantime, I'm hoping to be able to show a hint of the effect with my new scope. We'll see what comes of it...

PhilipPasteur wrote:

Anyway, my stropping is doing something. I can "feel" the difference in the edge after the stones and between each grade of abrasive. Even the 0.025 micron abrasive on nanocloth makes a noticeable difference in the sound and ease of push cutting and the feel of the edge on my thumb...and especially in shaving. These strops slide across the blade with almost no resistance.

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Phil

I hope you have some fun with it and post your results!

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