

GUN LUBRICANT SLICK AND SMOOTH

VINCE BOTTOMLEY tries out the Microlon lubricant – but does it do everything it claims to achieve?

I HAVE before me a tiny bottle of blue liquid – a dry film lubricant. If you treat your rifle barrel in accordance with the instructions in the pack, it will improve grouping by up to ½MOA, cut down on cleaning and increase muzzle velocity.

Sceptical? Yes, you bet I am. As soon as someone claims that reducing the friction in a barrel will increase muzzle velocity, I know they are – well, crackers. Most of us have tried moly-coated bullets – moly is useful for lubricating the ‘bullet to barrel’ contact, which reduces friction and therefore pressure. Less pressure means less muzzle velocity. Initially, there were similar claims with moly regarding the need to clean less and the like. Moly still has its fans and I use it with some loads, where there is a need to reduce chamber pressure slightly.

However sceptical I may be, I am determined to give Microlon a proper test as I know that if I don’t get the expected results, I will be accused of not conducting the test strictly in accordance with the instructions.

I will not be subjecting any of my own rifles to the Microlon treatment – for one thing, it wouldn’t be fair to expect to see an improvement in a rifle which already shoots sub ½MOA, so the first job is to acquire a suitable rifle and I think I now have one.

A few weeks ago, our club treasurer approached me. “This is the first new rifle I’ve ever owned and I can’t get it to shoot under 4” at 100yd”. I checked the rifle over but he was right, the Kimber was a dog. It wasn’t helped by the chambering (7mm-08) and the weight (6lb 3oz including scope). The barrel is pencil-thin and the rifle kicks like the proverbial mule.

On paper, it looks like the ideal deer rifle – ultra-light, quality fibreglass stock, plenty of stopping power and plenty of room for improvement! It will make the ideal rifle for our Microlon test.

Just to make sure I was getting the best out of the little Kimber, I switched its 3-9 Leupold for my 36X Leupold benchrest scope and ditched the bipod in favour of a flat plate under the forend so that I could shoot it off my front benchrest pedestal and back-bag. Simply by doing this, I managed to get my three-shot



Here’s our little Kimber in full benchrest trim. Note the plate under the forend

groups down to around 3” with Hornady factory ammunition loaded with a 139gn V-Max bullet.

The next job was an inspection with the borescope. A thorough clean would be required to get rid of the fouling and copper. I finished off with JB paste and some KG bore polish. The bore looked pretty good after a couple of hours’ work.

I wanted to do some further load development to make sure that I was getting the very best out of the little Kimber but the only half suitable 7mm match bullets I had were some 168gn Sierra Matchkings – a bit on the heavy side. The Kimber’s whippy barrel is far too thin to contemplate five-shot groups, so I’m sticking to three shots and allowing plenty of time for the barrel to cool inbetween groups. The Vihtavuori manual suggested a load using N150 powder and I actually managed a sub 2” group while working up a load, so it’s definitely superior to the factory stuff. It’s still horrible to shoot though!

I loaded up 40 rounds with my pet load and divided these into two batches. After another thorough

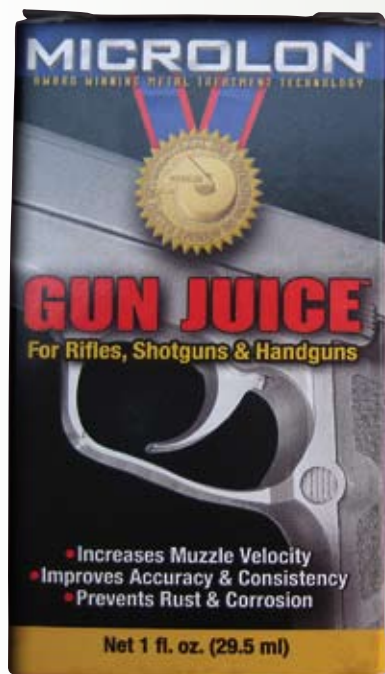
cleaning of the barrel and three or four fouling shots, I fired 15 shots, in five groups of three, over the chronograph before applying the Microlon treatment. The group sizes and muzzle velocities are listed in the table below. All shooting was from a concrete bench, using a benchrest front rest and rear bag.

Before the treatment with Microlon:

- Average group size:** 2.125"
- Largest group:** 2.606"
- Smallest:** 1.719"
- Muzzle velocity:**
- Average:** 2193fps
- Highest:** 2223fps
- Lowest:** 2162fps
- Spread:** 61fps

A suitable rifle for treatment I think, as there is clearly plenty of room for improvement!

I’ve already had a friendly warning from the UK Microlon distributor to follow the instructions ‘to the letter’ so here we go. Incidentally, these instructions were supplied to me by Microlon Europe Ltd. and are very different from those that were included with the bottle of liquid.



This is what it says on the box



	Group size in inches	Muzzle vel. shot one	Muzzle vel. shot two	Muzzle vel. shot three
1	2.069	2190fps	2191	2180
2	2.277	2223	2186	2212
3	1.955	2203	2191	2162
4	2.606	2207	2208	2178
5	1.719	2185	2182	2203

1. Clean the rifle as you normally would and dry the barrel.
2. Remove the barrelled-action from the stock and remove the bolt.
3. Heat the barrel with a heat-gun or hair-dryer to a temperature of at least 60°C.
4. Thoroughly soak a patch in Microlon and rod the barrel until the liquid dries in the barrel. Repeat this process eight or nine times, continuing to heat up the barrel.
5. Job done. Re-assemble and shoot.
6. After shooting and cleaning, a rod-through with a patch soaked in Microlon will help maintain the treatment.

The first job is to get the barrel up to temperature. If you want to feel what 60°C feels like and don't have a thermometer, mix two cups of water, one from the cold tap and one at boiling point. The resulting mix will be around 60°C – about as hot as you would want to put your hand in.

I tried to get the barrel up to temperature with a hairdryer – no chance, so I resorted to my gas blowlamp. The barrel was quickly heated up to a temperature where I could just about stand to hold it. I laid out nine patches and soaked each one in Microlon. Then I used the patches as I would if cleaning a barrel and stroked the bore for about a minute with each patch. After every couple of patches, I wafted the blowlamp over the barrel to maintain temperature.

The instructions state that you will notice that the patch becomes easier to shove through the bore, and after about the third patch I could definitely feel less resistance. The whole process took about half an hour as I not only had to remove the barrelled action from the stock but also the scope – my scope remember!

The bolt and trigger can also be treated with Microlon using the 'heat and apply' process but I wasn't about to waft a blowlamp over the trigger and bolt so I stuck to the hairdryer. I lubed every visible pin on the trigger and also the sear, which is visible through a small window. With the bolt, I simply heated it up and wiped it over with a Microlon soaked patch. I did not however repeat this process nine times.

One thing that was strange was that my hands of course became covered with the oily Microlon and after cleaning-up I went to wash my hands before re-assembling the rifle. Amazingly, my hands weren't oily by this time – in fact they looked dry, as if I had already cleaned them with thinners or some other solvent.

You've spent your money, treated your barrel, bolt and trigger so what can you expect? Microlon claims that:

- Groups should improve by up to ½MOA (except for match-grade barrels).
- The action will function more smoothly and the trigger pull will be better.

Notice that the increased muzzle velocity claim (as per the pack information) is now absent. I have however received a print-out of testimonials from American shooters lifted from an internet forum claiming increased muzzle velocity! So, did it do what it says on the box?

Three days later I was back at the range. The weather was very similar to the previous test – cold, dull and with a light breeze blowing.

As I had removed the scope, I needed to check the zero and I also thought it wise to foul the clean barrel



This is what we need to give our Kimber the Microlon treatment

so I fired a total of four shots before starting the test groups. Here are the results after treatment with Microlon:

Average group size: 1.737"

Largest group: 2.078"

Smallest: 1.310"

Muzzle velocity average: 2175fps

Highest: 2220fps

Lowest: 2113fps

Spread: 97fps

So, what did Microlon do for our Kimber?

Trigger? Before Microlon, the trigger was breaking at 3lb 2¾/4oz. After treatment, the trigger was still breaking at 3lb 2¾/4oz. No change there then, but the Microlon blurb says it will be 'better' rather than lighter. It didn't feel any different to me but remember, I only applied the liquid once.

Smoother action? This was difficult to detect, especially as it was three days between tests. Maybe if I had used it immediately afterwards, I could give a better opinion but again, I would say no change. Before treatment, as always, I applied bolt-grease sparingly to the lugs and camming point. If you don't use bolt grease (but you always should) Microlon, or any other lube, will improve things.

Muzzle velocity? An average loss of about 10% after the Microlon treatment – at least proving that Microlon is an effective lubricant.

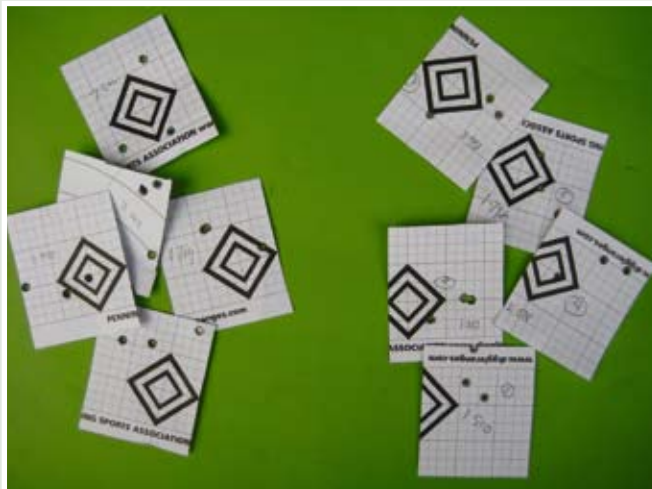
Similar reductions are experienced with moly-coated bullets.

Smaller groups? Amazingly, yes! An average improvement of 0.388"/MOA or 18%.

The barrel will be easier to clean? How do you assess this? It takes me about five minutes to clean a barrel – a couple of wet patches through the bore, scrub with a bronze brush (one pass for every shot fired), patch out, then wet patch/dry patch until they come out clean. I couldn't see any difference. Perhaps if I had fired dozens of rounds, I may have seen a difference.

A 1oz bottle of Microlon costs £11.23 and there is enough to treat probably three or four rifles. Is Microlon a good product for shooters? Our test definitely gave a useful improvement in accuracy. How long would this be maintained? I do not know. How often will the bore need to be treated to maintain this level of accuracy? Again, I cannot say, though the instructions suggest patching out with a Microlon soaked patch after cleaning will do this. Other Microlon lubricants are available but contact the UK distributor on stuart.crane@microlon.eu.com for more details.

In conclusion, my test was hardly exhaustive yet I am confident that accuracy did improve with our test rifle. Obviously I cannot guarantee that you would obtain the same results with your rifle.



My groups: 'before' on the left, 'after' on the right

	Group size in inches	Muzzle vel. shot one	Muzzle vel. shot two	Muzzle vel. shot three
6	1.510	2187fps	2180	2192
7	1.310	2220	2216	2194
8	1.991	2171	2164	2168
9	2.078	2177	2186	2174
10	1.798	2134	2153	2113