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ISSUE 4 £4.75

MAGAZINE

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BMW Special

Celebrating 100 years of the Bavarian favourite

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MEGA

PRODUCT TEST 3

PASTE WAXES ✓



CREATED BY PVD - THE UK CAR CARE TRADE ASSOCIATION - FOR PROS & ENTHUSIASTS



Megatest III: Paste Waxes

Wax has been used to preserve finishes for rather longer than the car has existed - some date its creation at the start of the nineteenth century in Bischofsheim, south west of Frankfurt in Germany. Originally it was produced from animal fats, and used on horse-drawn carriages. These would have been painted in an enamel finish. Two-hundred years later we're still waxing our cars - be it with more advanced products, on rather different paint.

We asked our readers what they would like to have in the next Megatest and there was a clear verdict: paste waxes. So for the third Megatest we assembled twenty-five of the most recommended waxes from twenty-one manufacturers. In order to pick this cream of the current crop, we asked our members for their professional opinions, as well as members of the Detailing Addicts Facebook group, to provide an enthusiast point of view. We then amassed £1330.11 worth of waxes. There were a couple more we wanted to feature, but there was a limit to what we could handle, and even had the odd manufacturer refusing to be tested against competitors...

Opinionated wax reviews are always available, but we wanted to do something a little different - we wanted to add genuine science into the blend.

Faced with so many products, we thought it wise to categorise them, just to split the field up a bit. Initially we thought about dividing them by genre - organic, polymer, and hybrid. Alas very few waxes are entirely organic and there aren't all that many fully synthetic options either, such is the marketing power of Carnauba. The struggle continued with hybrids as there were some with silicon dioxide (SiO₂) - the new Carnauba in the detailing dimension - whereas some were a more conventional blend of organic wax and artificial gloss enhancer. A couple even have PTFE thrown in for good measure.

The next option was to look at how the manufacturers had pitched their product - dividing between a show wax, which is all about the gloss, and a durable wax, which is all about longevity. The problem here was that most products claimed show-winning gloss and age-defying durability. We can't blame them, it's tough to sell a wax that admits to lasting thirty seconds, or that doesn't give some sort of superlative gloss.

We did consider about dividing the selection by price. From the outset, however, we didn't want it to be a price-led test - we want to find the best waxes out there, whether it costs two-figures or three. Then the readers could decide whether they wanted to remortgage the house or not.

Once we had entirely failed at dividing the field, we tried to at least agree on criteria.

Early on we decided two properties commonly emphasised in previous reviews would take a back seat - value and smell. Value is subjective. Some want the best wax possible, regardless of cost, whereas others balance the price against the quality of the product. Smell is not only a personal judgement; it is also somewhat irrelevant in the bigger picture. However, if it's that important, you can always attach a magic tree air freshener to your face with an elastic band while waxing - at least then nobody will come and talk to you. This left us to settle on the five primary criteria:

- Gloss
- Durability
- Water behaviour
- Colour shift and
- Ease of use.

These, we feel, are the corner-stones, indeed the *minimum* properties a wax should have to call itself great.

The first two are obvious requisites, but water behaviour, for example, alludes to the surface created by the wax - the easier water slides off, the easier the car will be to clean. Ease of use can mean the difference between a pleasurable afternoon protecting your car or a frustrating two hours removing residues that you left curing for too long. Colour shift will matter more to some than others, but it can divide the line between just a shiny car, and one which pops when the sun hits it. The marks for each criterion have been itemised so you can pick and choose what is important for you. **Methodology>>**

Megatest: Methodology

So, now we knew the waxes to test and what attributes we wanted to compare, it was time to devise a method to achieve useful and consistent results. At this point we drafted in two sets of expertise - scientists and an experienced product tester. In the last issue we visited the Autoglym labs in Hertfordshire for a nose around and were blown away with the facilities, expertise, and ingenuity present at one of the country's most established car care manufacturers. After a moderate amount of pleading and nagging, we were able to secure a day in the lab and access to their equipment. We then called on Megatest veteran Jon of the 'Forensic Detailing' YouTube channel to come along and help advise. Not only was his knowledge and expertise invaluable for this and the last Megatest, but he also added an extra level of objectivity - he is not associated with Autoglym or any of the products, so he is truly independent.

Gloss

The first test we wanted to test was the one most people get excited about: gloss. You may imagine it would be easy to test - simply take a gloss meter reading before and after waxing, work out the difference and voila! However, we couldn't do this on a generic car as all the panels are slightly different and the readings would be corrupted. Instead, we used steel squares that had been painted with standard black automotive paint and clearcoat. Again we hit a problem - perfectly polished panels gave very high initial gloss readings and though the waxes made an improvement, the variation between them was difficult to measure to a degree which showed clear differences. Finally we found a solution - if the panels were dulled to 3000 grit wetsand spec, the waxes made a more measurable improvement. As an example, using R222 - a wax known to give some pretty impressive gloss - on a shiny panel our initial readings averaged at 41.4% and our final readings averaged 48.2% - only a 6.7% improvement. On a dulled panel, all the waxes made between 11.5% and 32.5% improvements. It gave us a larger, more discernable scale with which to illustrate the differences.



To measure the gloss we used the Tri-Glossmaster 20-80-65 - over £2,5k worth of precision instrument. We took three 'before' readings and three 'after' readings spaced across the panel for each wax. We used the 20 degree figure >>

on the advice of our chums in white coats who clearly concentrated at school far harder than we did. The readings were averaged and the differences calculated. We then turned that figure into a score out of 100 (referred to as the 'scaled figure') - as we have with all the other data - to make it easier to compare the results for the different tests across different products. For all the scaled data, the higher the figure, the better the result.

Application

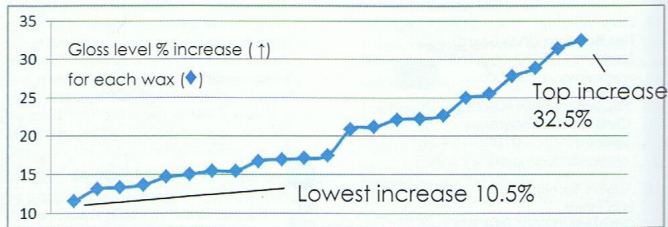
We had more technical challenges to face with the application. Some waxes came with applicators, others didn't. Some suggested that half a dozen products from the same manufacturer should be used prior to the wax, others weren't so fussy. Thus we had to draw some lines in the sand - we would use the applicator supplied and if none was supplied, we used a generic foam applicator - the same material for all the waxes. We applied a solitary layer of wax as directed on the instructions - none of the products insisted on multiple layers, and applying more than one layer would probably bias longevity measurements. For cure times we followed instructions where present or, if nothing specific was supplied, we judged with the trusty finger swipe test.



Finally the panels were prepared with Bilt Hamber Cleanser Fluid - though Bilt Hamber produce a Double Speed wax, it wasn't in the test this time, so it wouldn't give any brand a particular advantage.

Incidentally we tested the product to see how easily it removed old wax and the Cleanser Fluid got top marks - cleaning the panels quickly and thoroughly.

To ensure a fair test we asked Jon to apply and buff the waxes and use a fresh microfibre when buffing. Autoglym kindly provided dozens of microfibers for us, a conventional 80/20 polyester and polyamide blend that wouldn't favour any particular product over another.

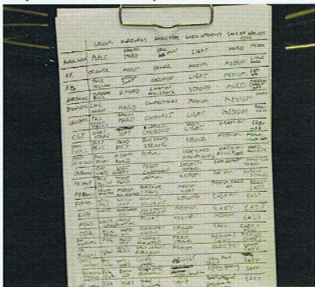


The graph above gives you some idea of the gloss spectrum - there really is a wide variation (11.5% to 32.5% shown on the y-axis), with each mark a different wax's result, from lowest on the left to the highest on the right. Oddly, that big jump in the middle has no correlation to wax type or price - or smell, funnily enough - it is just a natural break in the field. If we didn't have the luxury of the lab it would have been very difficult to accurately rate the variation by eye, but the science gives us objectivity. And cool toys...



Megatest: Methodology II
Ease of Use

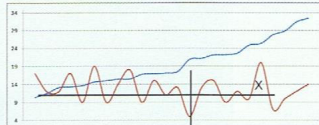
During the test we applied each wax three times - once for the gloss and colour shift test, again on different panels for the beading test, and finally for the durability test. During the lab day and a further five days of real-world testing, we took notes about what each wax was like to use. As you can see from the image below, the observations weren't always 100% scientific, but they allowed us to form a pretty good idea of what the 'user experience' of each product was like.



Water Behaviour

This was done both in the lab and during the real world testing. For the former we applied the waxes to new panels, this time highly polished to represent a properly prepared car. We then used a pipette to drop precisely 0.2ml of water onto the panel, placed on a custom built platform made of seriously heavy cast iron. With a handle driving a worm-gear

arrangement we could slowly and smoothly increase the pitch angle of the platform until the droplet of water started to slide down. We repeated the process three times for each wax and established an average angle. Just as with the gloss test, there was a spectrum of results from five to twenty degrees. The waxes that left the slickest surface would give the lowest readings.

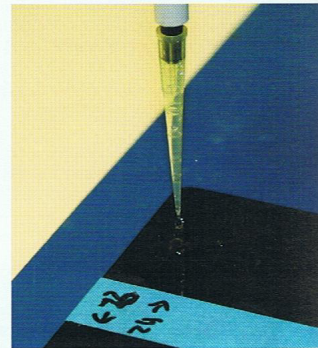


The graph above shows the previously graphed gloss improvement for each wax in blue (higher the better) and the bead angle in red (lower the better). As you can see there is not a direct relationship between the two - the best 'beader' (Y) is middling in terms of gloss, while one product in the top half for gloss (X) actually created the least slick surface.

As an aside, we also monitored the environment during the test procedure. The waxes were kept the night before at eighteen degrees, they were then transported in a flight case in the cab of the PVD Powervan, and the lab remained at twenty-one degrees with around twenty-six percent humidity throughout the test.

Colour Shift

Our next test measured the impact of the waxes on the colour of the test panels. We did this for two reasons, >>



firstly was intrigue. Some of the waxes we tested were specifically for dark coloured cars - notably the Dodo Juice Blue Velvet and the pair of Soft 99 polymer products. We wanted to see if it actually made any difference having a colour, or shade-specific wax. Secondly, for some users, having a wax that doesn't change the colour of the car, even slightly, might be relevant, especially on light colours.



For this test we used the X-Rite SP64 - about £5,000 worth of kit which gives three readings: one for darkness, one for red/green shift, and one for blue/yellow shift. We took initial readings off the dulled panels prior to the wax being applied, then a second set of readings once the wax was on - both were then averaged. The graph at the bottom shows the variation - the higher the value, the greater the colour shift. The readings are arranged like the previous graphs in order of increasing gloss. The blue line represents blue/yellow shift, the green represents red/green shift, and the red line represents darkening.

Interpreting the data is not easy - there are some very notable exceptions to any pattern. Generally speaking, the waxes had most impact on the blue/yellow spectrum. The top 'glossers', i.e. those on the right hand third of the graph, generally also had the greatest impact on colour. Further analysis reveals that with products of a similar glossifying ability, the synthetic polymer products, have a less profound impact on colour than their organic alternatives - the Power Maxed Tsunami SiO2 hybrid and Meguiar's Polymer waxes create less colour shift than the Chemical Guys Pete's 53 and Scholl Vintage organic waxes, though they produce similar levels of gloss, which lends to the theory that polymers give a more clinical finish than carnauba.

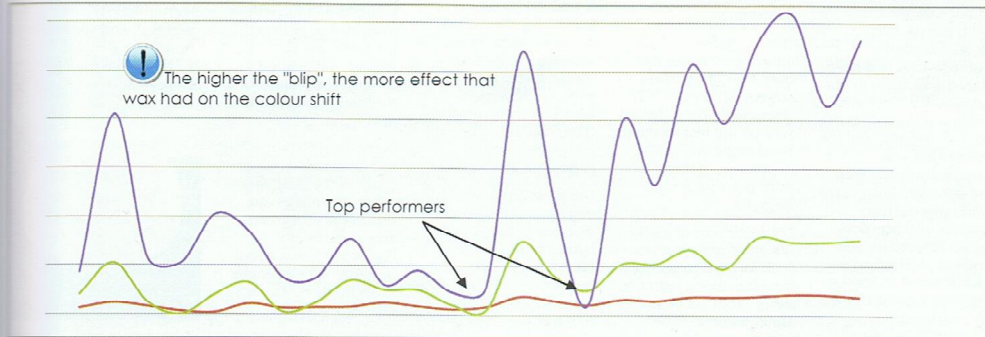
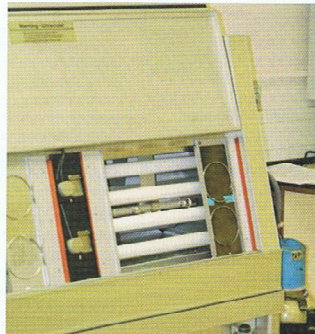
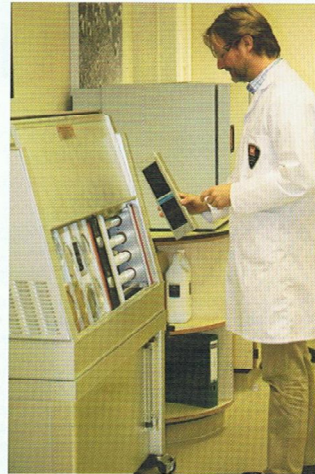
Durability

The durability of a wax is often difficult to judge in the real world. It is even harder to put two waxes against each other in a fair test as they will have different strengths and weaknesses. Picking the point at which a wax has expired is not straight-forward - just because it has stopped beading water doesn't mean it's no longer offering UV protection.

From our selection of twenty-five waxes we have a real mix of technology. Firstly there is the conventional organic protection that supposedly lasts anywhere between one and four months. Next are the polymer alternatives, some of which claim up to eighteen months of endurance. Until recently the toughest have been infused with PTFE like Swissvax Shield, though even that doesn't claim a year and a half of durability. Recently we have seen the introduction of SiO2-infused waxes that borrow technology similar to glass coatings. Whilst with ceramic coatings, some covalent SiO2 products are guaranteed for up to seven years with the correct maintenance, none of our waxes are making such bold claims. Key questions we would like to answer are: which organic wax lasts longest? And, does this new SiO2 technology live up to the hype?

Alas you will have to wait until our next issue to find out - we currently have the waxes 'cooking' in a newly calibrated artificial weathering machine, which simulates a major nemesis of waxes - UV light (right).

While it can't simulate the rain, wind abrasion, and general abuse a car may suffer, it can consistently simulate the damage inflicted by the sun. One day in the weathering machine is equivalent to a week of summer in the UK. We have the machine for the next four months - or just under two and half years in UV terms. The panels will be checked on a fortnightly basis with various readings taken to see how each wax is standing up. We will report the results in our Waxstock edition, along with the results of the glass sealant test we introduced earlier in the magazine. Jon is also running some tests over the winter on his own vehicles to see if there is a real-world correlation between his findings and lab produced results.





Auto-Glanz Ceará
£34.95 / 200g

Gloss:	63%
Relative Price:	82%
Hydrophobicity:	64%
Ease of Use:	76%
Colour Stable	38%

This is a natural wax blend, with about 28% Carnauba by volume. It comes packaged in a solid feeling glass jar which reveals a vivid red, cherry-scented hard wax. It is smooth to the touch, not exhibiting any of the grainy texture that can be characteristic of high Carnauba content.

The wax proved easy to use, with initial resistance giving way quickly as it was applied to the panel - it softens up nicely. After ten minutes it had cured, though it didn't leave that tell-tale crusty residue. Removal was stress and streak free with minimal grab. We didn't observe any ghosting or patchiness, making it a very pleasant wax to use.

In terms of gloss the lab results didn't do justice to our experiences in the field, but we fully expected some discrepancies and have allowed for them in our calculations. The bead angle was an impressive twelve degrees, and the colour shift was marginally better than the average. Auto-Glanz claim two to three months of protection, fairly standard for an organic product, so we look forward to finding out how it endures the UV machine.

Dubrub Dubwax
£39.99 / 200ml

Gloss:	44%
Relative Price:	80%
Hydrophobicity:	76%
Ease of Use:	76%
Colour Stable	89%

Dubrub are perhaps the youngest brand on test here and Dubwax is their hero product designed for VW fans new and old. The 200ml tub had some very cool chrome silver labels, alas they had rippled, mildly spoiling a very funky look.

The wax itself was by far the softest - it felt almost like petroleum jelly and struggled to cure properly. We suspect it needs further final tweaking with the carrier solution to get it right and cut down the greasiness.

That said, application was an absolute doddle, getting good coverage and no grabbing. Removal was a little more involved due to the greasy nature of the wax but no great hardship.

The raw gloss improvement was just over 15% (44% when scaled) which is respectable but a decent way off the test winners. Bead angle was really impressive, gaining joint third place with nine degrees.

For a first shot at a wax it's good one, and we look forward to seeing it develop, along with the other products in the Dubrub range.

Dodo Juice Purple Velvet
£32.50 / 250ml

Gloss:	43%
Relative Price:	87%
Hydrophobicity:	36%
Ease of Use:	67%
Colour Stable	70%

Blue Velvet is perhaps the oldest wax on test in terms of technology. It was one of the early champion products along with its soft wax alternative Purple Haze, which put Dodo Juice firmly on the map. It's our editor's personal wax of choice & we only just managed to prise it from him. (Ed: I want it back)

The high quality pot with a characteristically wacky label holds a generous 250ml of deep blue hard wax - one of the hardest we had on test.

Application was straight forward and it cured reasonably quickly to a light translucent haze, removal was very easy.

A Carnauba and Montan wax-blend, Blue Velvet was remarkably easy to work and provided a crystalline gloss - exceeding that which pure Carnauba waxes produce in terms of clarity. It created a 15% gloss improvement based on the average of three readings - beating quite a few more expensive alternatives.

The bead angle was 19 degrees - rather more than the polymer and hybrid waxes on test - but for a wax that came out last decade, it is a pleasure to use and one of the cheapest on test.

R222 Concours Look
£31.95 / 175g

Gloss:	74%
Relative Price:	82%
Hydrophobicity:	52%
Ease of Use:	95%
Colour Stable	32%

R222 has been around for years, working its way deep into the affections of amateur and professional detailers alike. Though durability is notoriously limited, it is marketed as a show wax, so focuses on gloss, and it really excels at gloss!

It has a strong solvent smell, relatively soft, and has Carnauba and beeswax granules that you can feel between your fingers. Application is very straight forward, spreading like butter and buffing off easily.

Alas, as a late entrant to the test we weren't able to run a fair assessment of its gloss enhancing abilities - there weren't any more dulled panels available - so the score is based on subjective real-world testing. It will be lab tested as per the other waxes here and the score will be amended if needed when we reveal the durability ratings in the next issue.

In terms of colour shift it had an above-average effect in the blue/yellow spectrum, marginally less in the red/green, and in terms of darkening it was about average. A bead angle of 15 degrees was on the high side too.

Power Maxed Monsoon
£29.99 / 100ml

Gloss:	50%
Relative Price:	70%
Hydrophobicity:	68%
Ease of Use:	76%
Colour Stable	91%

Monsoon is a natural wax blend with the addition of some hydrophobic ingredients - half way between a conventional organic wax and a hybrid, claiming two months durability.

We were struck by how well balanced the product was - soft and easy to work, but hard and oily enough to load up the applicator. A white wax crust gave way to a rose coloured centre, suggesting it was created with a staggered pour - a good thing.

It didn't cure to a dry haze, but after ten minutes it came away easily and with just a touch of drag. It scored well above average on both gloss (17% raw data, 50% scaled) and hydrophobicity (11 degrees), and we liked the honest 2 month durability claim - a good show wax.





Auto Finesse Fusion
£59.95 / 150g

Gloss:	39%
Relative Price:	60%
Hydrophobicity:	64%
Ease of Use:	76%
Colour Stable	82%

Even by Auto Finesse's high standards, Fusion came extremely well packaged and presented. It comes from a long line of waxes but there's something a bit special about this one. Nominally it is a Carnauba polymer blend - i.e. a hybrid wax.

The product needed more spreading than others, and regular reloading of the pad, but the pay off was very easy removal, despite curing quite subtly.

The lab results showed gloss levels were an acceptable 13% improvement in raw figures; but the water behaviour was above the group average, with only twelve degrees needed to make the water droplet flow off the panel - a great wax for those into beading!

Furthermore, it was in the top quarter when it came to keeping the original hue - it created minimal colour shift, particularly in the red/green spectrum where many others fail.

Given the relatively high price and great water behaviour we suspect there might be some clever chemistry going on in the background - we look forward to the durability results.

Autoglym High Definition
£45.99 / 150g

Gloss:	67%
Relative Price:	69%
Hydrophobicity:	64%
Ease of Use:	95%
Colour Stable	54%

Obviously the Megatest was conducted on HD's home ground so some may question the objectivity. However, when we did all the testing with HD, the Autoglym team (which had strangely swelled to five people at this point) watched from a distance, leaning forward like celebrities on Top Gear (the good one) when the lap times are revealed.

They needn't have worried, as HD was perhaps the easiest wax on test to use - it went on smoothly and evenly, revealing how well developed it is. After nine minutes, it came off with minimal effort leaving a noticeably deeper gloss than the surrounding products.

The equipment confirmed that the gloss was dramatically improved, up by 23% - the only other non-SiO2 hybrid to beat it was their own development wax that was being tested at the same time - that scored 28%, boding well for future products.

Water behaviour was good, above average at twelve degrees. HD has a good reputation for durability so should do well in part 2.

Autoperfekt Ayrshire
£25.00 / 200g

Gloss:	39%
Relative Price:	87%
Hydrophobicity:	44%
Ease of Use:	95%
Colour Stable	87%

Ayrshire is another wax, like Auto Finesse Fusion, that has something a bit different to it. We were impressed with how it starts as quite a hard wax but as soon as it's introduced to the paint surface, it softens and spreads really easily.

Again it was tricky to tell when it had cured, but, when removed, the translucent paste came off with no dragging, and no smearing or greasy sensation.

Overall the user experience was on a par with that of Autoglym HD - ideal for those with less experience or patience.

Autoperfekt don't make bold durability or hydrophobicity claims with Ayrshire, the latter of which correlates with the lab report, needing seventeen degrees to make the water flow.

Gloss was up to standard though, matching Auto Finesse, and it was the only product in the whole test that created no colour shift at all in the red/green spectrum. It got second place in not darkening the finish, and it was near the top in the blue/yellow shift.

Overall it is a pleasant wax, ideal for application in the field.

Britemax Vantage
£42.95 / 236ml

Gloss:	46%
Relative Price:	81%
Hydrophobicity:	40%
Ease of Use:	86%
Colour Stable	72%

Vantage is one of those quiet hero waxes - many of our PVD members use it as their daily go-to wax over and above the various boutique or fashionable alternatives.

We can see why - it is very easy to apply and buff off. Again the cure is quite subtle, perhaps a trait of these Carnauba and polymer hybrids. We get the feeling you could safely wax the whole car at once, rather than panel by panel, and still have no problems buffing it out.

In the gloss stakes it was an upper-mid player, with raw figures averaging at 16% on gloss - a solid performance. Water behaviour was slightly below par needing eighteen degrees. The plastic tub design is worth mentioning - it has a really wide aperture like the Megular's offering, which makes it easy to get your foam applicator in - a nice touch that makes life easier.

The ease of use and good value bump it up the ratings, while Vantage also claims 3-4 month durability - if it lives up to that, we have a candidate for the best all-rounder on test.

CSP Carnauba Wax
£75.00 / 170ml

Gloss:	49%
Relative Price:	56%
Hydrophobicity:	76%
Ease of Use:	76%
Colour Stable	84%

CSP are known for taking a scientific approach to car care products, working with the University of Liverpool on Nano particle research. Despite all the high tech developments, this product is presented as an organic Carnauba wax - we wouldn't be surprised if some of that nano-tech know how has filtered into the formulation though.

It is a soft and buttery product making it really easy to use - spreading evenly and coming off quite easily too, with minimal grabbing you can often get with high Carnauba waxes.

The gloss was above the test average at 17% in raw figures, though water behaviour was well above average, needing only nine degrees on the 'beadometer' before the water slipped off the surface. It also performed better than most in the colour tests, and was middle of the road for darkening.

For an organic wax, the one year durability claim is a very bold one - if the product lives up to this, we may well be one of the most durable organic options on the market.



Swissvax Shield
£130.00 / 200ml

Gloss:	50%
Relative Price:	35%
Hydrophobicity:	52%
Ease of Use:	86%
Colour Stable	82%

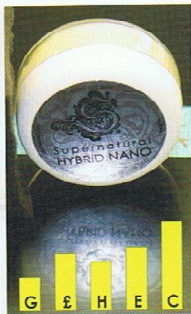
Swissvax are very well known and respected for their high-end wax offerings. While entry levels like Onyx undercut it, Shield is one of the more affordable options in the range - at £65 per 100ml it undercuts less established brands by up to £20. Our members have been using Shield for years, though now those with the Swissvax approval have moved to the next-generation 'Endurance' wax.

Shield has a very high Carnauba content, making it feel quite grainy. Application took some skill to get a nice, even coverage, which soon turned to a white haze.

Removal was easier, it came off cleanly with no smearing, and felt 'right' - difficult to quantify, but you felt the quality.

In the lab the water behaviour and gloss were mid-table, with 15 degrees needed for the bead to run and a 17% improvement in gloss. Real world testing suggested it perhaps should have tested higher.

The secret weapon of this wax is its PTFE content - it's called 'Shield' for a reason and we look forward to seeing the durability results, where it may well stand out.



Dodo Juice Supernatural Hybrid Nano
£34.99 / 100ml

Gloss:	35%
Relative Price:	60%
Hydrophobicity:	52%
Ease of Use:	67%
Colour Stable	94%

To give its full name, Dodo Juice Supernatural Hybrid Nano, is one of five pioneering SiO2 hybrid waxes on test. Compared to the others it feels the most different - the most daring perhaps. Unlike others, Dodo claim it can be used to enhance and even restore a ceramic coating on a car - potentially useful given how many people seem to be 'having a go' at applying them.

We had a little panel pot for the test and found it quite tricky to apply - it was dry and took some spreading, though removal was a cinch.

Gloss wasn't quite up there with the rest of the field, nor the water behaviour - though it was among the best for not provoking a colour shift - so you get to keep the car in the same hue that you bought it in.

Endurance is claimed to be 5-7 months - and we think this is where Nano will start to shine - pun intended, sorry. It's marketed as a sealant rather than a wax - and while its initial test results were below expectation, we suspect it has hidden talents.



Fireball Fusion
£85.00 / 100ml

Gloss:	65%
Relative Price:	15%
Hydrophobicity:	52%
Ease of Use:	76%
Colour Stable	89%

We were excited to try the SiO2 wax offering from Fireball. Over the last year the Korean brand has gained traction in the UK, and we were intrigued to know if it was as good as all the hype, and, in the case of Fusion, if it justified the price.

First impressions of the bright yellow wax were positive - the balance of hardness and lubricity seemed pretty much bob-on, and we liked the applicator sponges - though it came with a pair of mini spoons - we still have no idea why. Application gave a bit of drag, though it flashed off quickly, and proved easy to remove.

Fusion really impressed both in the lab and in the field - 22% raw gloss improvement was right up there, though it did have a marked darkening effect and a red/green colour shift. It was about average on blue/yellow colour shift. Water behaviour was more impressive in the field than the fifteen degree lab reading, earning it extra points.

Fireball claim 3-6 month durability, and if it can deliver on the upper end of that, it will fly up the rankings - if the relative price decreased it could top them all...



Power Maxed Tsunami
£49.99 / 200ml

Gloss:	92%
Relative Price:	75%
Hydrophobicity:	64%
Ease of Use:	48%
Colour Stable	29%

Power Maxed have made some bold claims for Tsunami. Like the Fireball product it is an SiO2 hybrid, but this time they claim up to 18 months of durability. Furthermore it is less than a third of the relative price of the Fireball offering.

The cherry Bakewell scented, vivid yellow wax was among the hardest on test - it was a rock to such an extent that it rotated inside the black glass container. Frankly, it was a pain - grabby on application, smeary on removal - a tweak to the carrier solution or perhaps dampened pads are badly needed here.

But, and it is a massive 'but' - all that work was more than worth it. We were blown away - gloss was off the scale at just over 31%, putting it a close second to a much more expensive organic show wax and best in the SiO2 hybrid class. Bead angle was good, on a par with Autoglym High Definition.

If the durability tests prove Power Maxed's claims we have an undeniably amazing wax here, if the chaps in Warwickshire can sort the application, we will have a game-changer.



Angelwax Enigma
£180.00 / 250g

Gloss:	45%
Relative Price:	18%
Hydrophobicity:	56%
Ease of Use:	86%
Colour Stable	87%

Enigma is the fourth of five SiO2 hybrids in this test, and like SNH Nano, it has been put together by one of the industry's heavyweights.

We have tried to restrain ourselves from using automotive analogies for the last 95 pages, but alas we can't make it these last five pages. Enigma is a Subaru Legacy. Let us explain.

Enigma is a medium-hard, purple wax that has a whiff of spiced fruit. Application is straightforward - it drags a bit but then loosens up nicely. Removal was even easier.

In the lab it got an average of 16% gloss improvement, and a 14 degree bead angle - very much mid-field figures. Unlike some of the other SiO2 hybrids, it was above average for colour shift. If you look at the price, and if you're playing a numbers game, it shoots down the rankings pretty quick.

Like a Subaru Legacy - it is expensive, about average on performance. Then you use it in the real world, and it all makes sense. Jon declared Enigma to be his favourite wax - it can't be quantified, it just feels good, really good, and we're yet to test durability - potentially a strong area.



ODK
Concours
£40.00 / 50ml

Gloss:	40%
Relative Price:	60%
Hydrophobicity:	76%
Ease of Use:	86%
Colour Stable	71%

This wax from ODK is clearly aimed at the show market. With a high Carnauba content blended with polymers to create a medium to hard, pale yellow hybrid wax.

Apart from the awkwardly narrow pot, application was easy - the custom narrow sponge applicator worked well and it was the nicest smelling wax on test, with a mango scent with perhaps a hint of passion fruit.

Application on a car was very easy and it felt like a well balanced and developed formula - an achievement for something with such high carnauba levels.

The lab tests seemed at odds with real world experience - we felt the gloss was better than the readings suggest, while the water behaviour was not quite as impressive as the nine degree angle on the tilt test alluded to.

As a show wax that can be applied in quite a wide range of conditions we think it is a good all-round, if slightly dearer product. I know we said we wouldn't focus on smell, but it turned most of the white-coated scientists in the lab into squabbling children wanting a sniff!



Bouncer's
Sherbet Fizz
£39.99 / 260g

Gloss:	51%
Relative Price:	80%
Hydrophobicity:	60%
Ease of Use:	76%
Colour Stable	90%

Bouncer's started as a small homebrew operation, but the strength of their products have ensured quite rapid growth and the release of some exciting new products.

Sherbet Fizz needs some care to apply properly - it goes off rapidly so a panel by panel approach is recommended. The natural coloured wax is initially quite hard and slightly brittle but rapidly softens as it is worked - they recommend three minutes cure time and we strongly suggest following the advice as it can be hard work to remove if left much longer.

We don't have much information on the make up of the product - Jon suspects Montan wax might be involved due to the clarity of gloss, but this could just as easily come from a polymer gloss enhancer.

The lab results were good - above average gloss and water behaviour, backed up by real world impressions.

When it comes to durability, our sixth sense is telling us this might do rather well - the hard and rapid cure suggests it might be a star performer.



Fusso 99
Fusso Coat
£20.99 / 200ml

Gloss:	61%
Relative Price:	90%
Hydrophobicity:	92%
Ease of Use:	48%
Colour Stable	17%

Fusso has taken the internet by storm - it is a darling of the enthusiast detailer all the way from Japan.

It comes in at a very competitive price point, and Fusso's reputation for beading and extreme durability has established it as a people's favourite, topping the Detailing Addicts' choice poll.

Fusso is a medium to hard, smooth blended wax with a whiff of aromatic solvent and the wide pot with integrated applicator are practical. One note of caution - the pot (similar to King of Gloss) needs levering open with a tool like an old-school tin of beeswax.

Application was a mixed bag - it goes on easily and spreads nicely but put it on *one lot* too thick and you'll end the day looking like Popeye - it can be hard work, particularly if left too long to cure. As soon as you see a powder-like haze, buff it straight off.

The results thus far match the reputation - gloss was well above average and the water behaviour topped the table by quite a margin. It did affect the colour of the paint though.

Durability is supposed to be Fusso's party trick - in fact it is more of a sealant than a wax - so next issue we won't be entirely surprised if it bags a gong.



Finish Kare
1000P
£17.95 / 400g

Gloss:	31%
Relative Price:	95%
Hydrophobicity:	44%
Ease of Use:	95%
Colour Stable	90%

Like Fusso and Dodo Juice SNH Nano, FK1000P is described as a sealant. To be more specific, it is described as a high temperature sealant - thus being suitable for things like polished exhaust tips, and Vauxhall Zafiras...

Application is very easy - pretty much wipe on, wipe off - and it's a pretty soft formulation. Like Nano, FK1000P struggled in the gloss and hydrophobicity tests, but then its primary selling point is durability so you'll have to wait before its technology reaps dividends.

One category it does win in price - it is the biggest pot and costs the least - in fact it works out at under £5 per 100ml, compared to Fireball Fusion, which is over eighteen times the price. Admittedly Fusion is new and uses lots of clever tech, whereas FK1000P has been around for yonks and doesn't claim to include any ground-breaking chemistry.

That said, almost every PVD member has a pot in their unit or van - which alludes to its talents much more than a flashy label could.



Scholl Concepts
Vintage Wax
£156.00 / 200g

Gloss:	95%
Relative Price:	22%
Hydrophobicity:	56%
Ease of Use:	67%
Colour Stable	13%

Scholl Concepts are known for their compounds - S20 Black has been out just over a year but it is now a standard 'go-to' for many detailers. Now they are really focusing on expanding the range, most notably with their NEO range of polymer sealants.

It's slightly curious then that they have also brought out a pair of more traditional organic waxes - namely 'The Rock' and this 'Vintage' - both well over £100, putting them against some pretty stiff competition.

At first sight you can tell it is packed with Carnauba, 30% by volume no less, with a dry, grainy feel. It went on with a bit of effort, and cured to a dry, hazy crust, which was a little grabby to get off.

But it was worth the effort - officially the glossiest wax on test, trouncing Chemical Guys and Power Maxed with a raw average of 32.5%, making up for the arduous application, average water behaviour, and for some at least, the price.

It feels old school, but out of the blue it has shown everyone how gloss should be done.



Chemical Guys
Pete's 53
£28.95 / 226g

Gloss:	85%
Relative Price:	87%
Hydrophobicity:	72%
Ease of Use:	95%
Colour Stable:	8%

Chemical Guys are a big player in the detailing trade, both among the enthusiasts and the professionals, even more so across the pond. It was on Jon's recommendation that we included Black Pearl, and we can see why he suggested it.

It is very well priced but packed with exotic ingredients like almond, coconut, banana and propolis oils. There seems to be a trend with anniversary waxes doing well - Scholl's Vintage was developed to celebrate 50 years, this one celebrates 53 years (probably as they are using imperial measurements, still).

The white wax is very easy to apply and can be buffed almost immediately, or left to haze. The Carnauba and crystal polymers do the business - it was third for gloss after Scholl and Power Maxed - and provided a real 'wet look' - however the colour analysis showed it darkened the paint and impacted the red/green and blue /yellow readings more than any other - the only downside we can think of until durability, a supposed weak-spot, by reputation, is tested in the next phase.



Wax-Planet
Oblivion
£40.00 / 200ml

Gloss:	65%
Relative Price:	80%
Hydrophobicity:	76%
Ease of Use:	76%
Colour Stable:	39%

Oblivion is the final of the five SiO2 hybrid waxes on test and we have intentionally placed it next to iWax, another creation from Wax-Planet in Rotherham. Both contain Carnauba, both cost £40 for 200ml, and both have hydrophobic polymers; but only Oblivion has the silicone dioxide tech.

Oblivion is slightly harder and drier than iWax but still pretty easy to apply and buff off. Of all the SiO2 waxes, only Angelwax Enigma was easier to apply - and that didn't have the rather nice chocolate orange scent.

This brings us to the results so far - and it would appear that this SiO2 malarkey does make a difference - gloss was up just over 3% on iWax and water behaviour saw a 16% improvement.

Alas it did cause quite a significant colour shift - 22% more than its older brother.

Both lab and real-world results really impressed us - as it stands we think it's a great all-rounder, if it lasts well, it could have a podium place.



Wax-Planet
iWax
£40.00 / 200ml

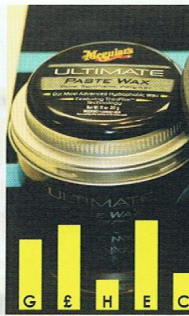
Gloss:	62%
Relative Price:	80%
Hydrophobicity:	60%
Ease of Use:	82%
Colour Stable:	61%

Presuming you are reading these reviews in order, iWax might be feeling a little awkward right about now as its newer sibling has got some new tricks that potentially put this apple scented hybrid in the shade.

Like Oblivion, iWax is no chore to apply, though not quite as easy as some of the pure polymer options. If anything, it is ever so slightly easier being a touch softer, and it is a smidge easier to judge when to buff off.

Unlike Oblivion it doesn't alter the colour of your car and still offers plenty of gloss and beading, and early signs of real-world testing suggest the durability will be pretty good too - in fact Wax-Planet claim it has the same endurance as Oblivion - so it's still all to play for, so to speak.

Do also consider how the headline figures are established for this test - the percentages are derived from the raw data - with gloss it magnifies the difference - in raw terms Oblivion only increased the gloss 1.1% more than iWax, and there was only a 4 degree difference in bead angle...



Meguiar's
Ultimate Paste Wax
£26.99 / 300g

Gloss:	75%
Relative Price:	90%
Hydrophobicity:	32%
Ease of Use:	95%
Colour Stable:	40%

Meguiar's won two of the three top awards in our inaugural Megatest a year ago, so it's only right to include a product here. Like Autoglym HD, it is designed for the mass market - to be applied by people who don't necessarily know the difference between a polish and wax, or just don't bother to read instructions.

This shows, as it was among the easiest product to apply in the test - despite being a hard, dry blend it really is a doddle to spread and then buff off. You could probably leave it overnight and still have no trouble in removing it. Then there is the packaging - for your £27 you feel that you are getting value for money.

You might imagine it's a fairly ordinary product under all the fancy packaging - but actually it's really rather good - it came in fourth for gloss with just over 25% improvement in raw terms, though it did significantly darken the paint and the colour test also revealed that it had altered the colour in the blue/yellow spectrum.

Also, it's not a big beader, needing 20 degrees before the droplet slid off. Ideal for the casual car care enthusiast though, just for ease of use.



Soft 99
King of Gloss
£20.99 / 300ml

Gloss:	73%
Relative Price:	93%
Hydrophobicity:	72%
Ease of Use:	48%
Colour Stable:	21%

The final product in our test has a similar issue to iWax but in reverse. It was brought out after Fusso to offer even more gloss, and in that regard it has succeeded. Just. The scores above are turned into percentages, from smaller percentages. This allows the differences between products to be clearer. So, based on a scale of 0-34% gloss enhancement that we saw in the raw figures, we've multiplied that using maths (by 2.94) to expand the spectrum over 100 - thus a percentage. So while the score is up 12%, in raw data, it's only just over 4% above Fusso's result.


While King of Gloss is cheaper than Fusso by volume. Its hydrophobicity is significantly worse - going from Fusso's Megatest winning five degrees to an 'above average' ten degrees. Furthermore, the application process is just as fiddly, and it corrupts the original paint colour a little more.

They could have taken the opportunity to create a easier on, easier off product with even more gloss to provide a lovely topping for Fusso - but they haven't, and that's a real shame - it's that tricky second album syndrome - let's hope they have a Radiohead moment with their next attempt!

Megatest III - The Results

There has always been a demand for a Megatest on paste waxes - but in the past we have shied away from the genre as it was such a subjective topic, and open to dismissal without proper data figures. Thanks to Autoglym and their cutting-edge lab facilities we have finally been able to do one that stands up to scrutiny. Equally, a chance encounter with Jon Delieu on the first Megatest has led to a great partnership for which we are eternally appreciative. So everyone should raise a glass to these chaps - unsung heroes.

Moving on to the results - the first point that needs to be made is that these are NOT 100% definitive. We tested one pot of each wax on four, maybe five different painted surfaces. Whilst we had all the equipment calibrated to specification, and made the tests as fair and balanced as we could, it is possible someone else could run the tests tomorrow, with slightly varied conditions, and get a different result. Secondly, waxing a car, for some at least, is quite a personal experience, intimate even, and just because Jon or myself enjoyed using a product, doesn't mean you will. We always recommend you try different things and see what you like - there are very few 'bad' products out there.




Top Score
GREATEST GLOSS
VINTAGE WAX
by
SCHOLL CONCEPTS

COMMENDED
GREATEST GLOSS



TSUNAMI
by
POWER
MAXED

COMMENDED
GREATEST GLOSS



PETE'S 53
by
CHEMICAL
GUYS



Top Score
BEST BEADS
FUSSO COAT
by
SOFT 99

SUGGESTED
WAXES TO WATCH...

FUSION
FIREBALL 

VANTAGE
BRITEMAX 

ENIGMA
ANGELWAX 

COMMENDED
BEST BEADS






Oblivion **Concours** **Finest Grade** **Dubwax**
WAX-PLANET ODK CSP DETAILING SYSTEM DUBRUB


RECOMMENDED
BEST VALUE


1000P
FINISHKARE 


ULTIMATE
by
MEGIAR'S 

KING OF GLOSS
by
SOFT 99 


RECOMMENDED
BEST USER EXPERIENCE


High Definition
Wax
AUTOGLYM 

AYRSHIRE
by
AUTOPERFEKT 

COUNCOURS
by
R222 

RECOMMENDED
COLOUR PRESERVER

SNH NANO
by
DODO JUICE 

MONSOON
by
POWER MAXED 

SHERBET FIZZ
by
BOUNCER'S 