

Meet The Geeks

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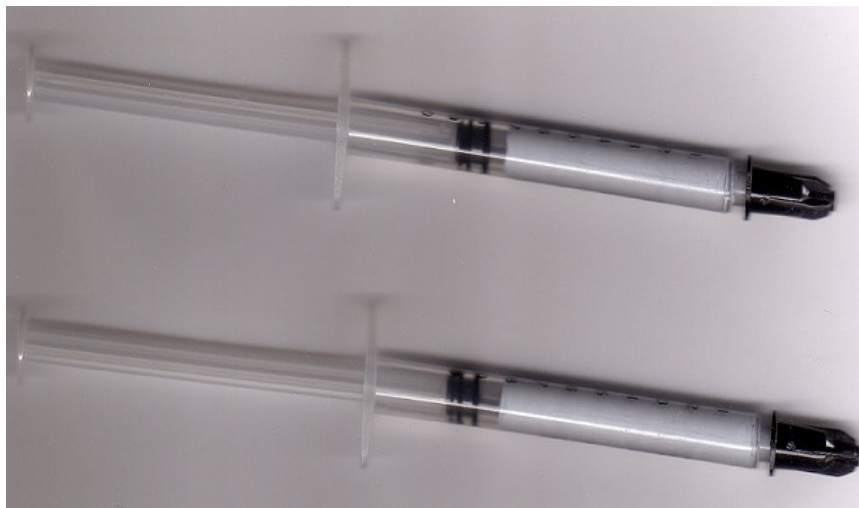
A few years ago a company who are going to remain nameless for this article created a product that made a difference in the computing world and rocked the very foundations that had been in place for years before.

Now the guy that solely made this difference, is called David, and for one reason or another left the company to branch out on his own. His old paste is still made by the old company, but the new paste that improves on the old is solely his. So what we have today is new to the UK, and no one else as yet has it, but its also new to the way paste is being made.

Testing paste is not always a straightforward or easy thing to do. I apply small amounts of paste with a masking tape surround and spread it in one smooth even stroke with a plastic credit card. At least there is one good use for an American express! I pull the paste across the die in one motion and then remove the tape. If I'm not happy with its level I always remove the paste, and do it again. Practice is what has meant I can get it in one go more often than not now, so after the tape is removed its ready for the heatsink.

The best way to test the paste is to compare temps on the old system and on the newer paste. The differences should hopefully mean lower temps. I used AS5 as a comparison base, most people use it, and I know most people have access to it in either a blister pack, or in a syringe from their favourite stockist. Now you do have to allow for curing time, a rapid onset of heat to paste to start the ball rolling and then time with heat to let the paste find its stable point where the heat transfer is optimised.

Now I have looked into this, some pastes take a matter of hours, some take days; this one achieved its best after some 2 weeks of heat applied in general use. So I have allowed the other pastes the same standard 2-week window to cure before any testing can be applied. All pastes were applied in the same way with the plastic card, over a masking tape surround, and its all the same tape too so the thickness is even. Marker points were put on the heatsink so that standard temperature points can be measured. I know its nothing more than small ring binder reinforcer's, but it allows a set point, with clear access to the metal for the laser thermometer to work its magic on the temperature detection.



Hopefully, this would mean we don't get the unfair testing method mails. We do try to keep things as simple as we can and also as standardised. This should give everything the same test environment. The first paste I wanted to try was some white goop we got with a heatsink some months ago. Its white has no markings on it and I assumed it was some 7stars paste. Its not, its thicker and slightly different in colour.

The basic set up was done and the heatsink was cleaned with a proper cleaner, the paste applied in the way described and left to cure with heat for two weeks. The basic temps were taken at various points along the way with a laser thermometer to give a more accurate reading. Bios temps were ignored, and only the software temps and laser temps were recorded. I know bios temperature recording is getting better, but it's still not accurate enough for what we want.

After two weeks the white goopy stuff of unknown origin came in at a core temp of 43 degrees, with the

heatsink recording temps of 44-43-41 degrees going up through the heatsink. The really interesting point was taking the paste off. It was like chewing gum that been left on a seat or road and you step in it. It was tacky, smelt awful but cleaned off with some cleaner and cotton swabs and a bit of scrubbing. Then the other AS5 paste was applied and allowed a good two weeks the same to cure. Now I know it doesn't need it, but all systems get the same treatment. Two weeks is plenty of time for it to get to the best it can be.

After two weeks the load testing began again with a climate controlled room for the same base of operations. This gave me a good solid working temp, but oddly gave little fluctuation between working and load temps. There are two reasons for this, one is it was warm to start with, the other it is efficient at heat transfer.

Anyway, the laser thermometer had good readings again in exactly the same points as before, the core temp was 41 degrees and the marker points were 41-42 variable and 42-40. This shows the heatsink is moving heat away but for some reasons seems to be either retaining heat or heat is moving in at a rate it can't really deal with. Or maybe the core is pushing it out fast. Anyway, whatever the reason we wont dwell on it. The final result was that the core is cooler than before.



So time to test the new paste. The mystery one is grey and thick so needed some slightly warm water to get it flowing better, and I am advised once the paste is fully released, it will flow easier. A mug of warm water and a few minutes in it, the paste was flowing enough to spread it easily. The same surround of masking tape was applied and the paste spread out as thinly as I can get it. The system was then once again run until cured for two weeks. I have already done the graphics card with this stuff, and the Northbridge, and Southbridge. So this whole system is powered by paste, well this paste at least. The results spoke for themselves, and not only here, but also at other places who had the same paste. The core temp was a mere 34 degrees, with the marker points offering 37-36-35.

For what ever reason it just works. Yes it's a bit thick at the moment; yes it can be hard to spread if you don't warm it up, unlike the other variation you don't have to keep this one in the fridge. Its phenomenal stuff and gave a clear difference in temps on paste alone of 6-7 degrees.

Now this is some form of witch craft clearly, paste alone cant do this can it? Well yes it can, I sent it to a fair few others in the UK and all said the same, one of which was a reader at the Hexus Forums, and he said it was still good for 5 degrees minimum on his rig in hotter weather too!

What is it? Where did it come from?

Well it's the new paste from the man that gave the world ShinEtsu. It's a lot better than it's ever been and his secret formula came with him when he left and its only got better. So if you want it, grab it from the website and use it. I do recommend warming it a little in warm tap water to get it to flow easier; this will be fixed in final production but for now its no big problem.

My thanks as always to David for the chance to test his paste you can contact him directly through his new website at www.Tim-Consultants.com and try something very new and that will make the paste world stand up!!

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