

HTF COMPACT

Frequently Asked Questions

Revision History

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1. How do we know that it works like you said? I have never heard about such kind of thing. That sounds too good to be true

HTF Compact® is a highly innovative product which has a high potential to disrupt the market. That might be the reason why you have not heard about it so far. After HTF Compact is introduced, an immediate boost of the efficiency can be recognized. You will see the effect not only on your power bills but also on your operating equipment, which will need less energy to achieve the same output.

2. Is there a change in the water + glycol viscosity after the nano fluid is added?

There is a slight increase in viscosity values after addition of HTF Compact® (less than 2%). The mentioned increased in viscosity does not impact the overall power need at the pumps since the increased efficiency results in lower flowrates needed to achieve same performance.

3. Do we lose the glycol anti-frozen effect after the nano fluid is added?

No, since the HTF Compact is only added in a 5% v/v concentration and does not impact the glycol properties in solution.

4. We understand there is a saving because the pump from the cooling system works less but how do you explain a saving at the chiller level?

The overall system heat transfer is enhanced by the presence of nanoparticles in solution. This results in a better handling of heat from and to coolant solution. As a result, you will experience that your HVAC system components operation rate will decrease in order to manage the same heat load. This means that not only your pumps but most importantly, chillers and heat pumps will work at a lower rate to achieve same performance. This is directly translated into the single power consumption of equipment.

5. Is the product toxic?

HTF Compact® is classified as toxic to aquatic life in a pure product concentration. Nevertheless, as HTF Compact® is introduced into a final system solution its concentration decreases substantially (5% v/v). A final system solution including HTF Compact® is not impacted in its toxicity by the presence of the product.

6. How about the efficiency evolution with the time e.g. 2 years after nano fluid is added do we still have the same benefit? how can you prove it?

The efficiency is not reduced over time since HTF Compact® does not suffer from product effect reduction over time. Nevertheless, it is usually the case that some systems are purged over time or have leakages with a subsequent refill of coolants. In such cases, it must be assured that HTF Compact® remains at all times at 5% v/v concentration at all times. This can be proved by ongoing applications in which after 24 months of product introduction, performance is still at the same level.

7. How long does it take from product introduction until the efficiency can be measured?

The answer is very simple: from minute 0, performance is increased throughout higher heat transfer efficiency. After following our installation procedure and adequation of your system to the new enhanced performance of the coolant, you will recognize the performance at most system units electrical consumption, and most importantly, at your power bills.

8. Do I need to stop my HVAC system to install HTF Compact®?

No, the installation of HTF Compact® is quite simple and straight forward. You can add it while your system is running and base coolant in circulation. This gives the installation the flexibility of doing it at any time.

9. How do I make sure that HTF Compact® is at the right concentration in my system so that performance is maximized?

Our team of experts at our Headquarters are able to quickly assess performance of your system. You can send us a sample of your current coolant solution and TCT Nanotech will give support on whether an adjustment is needed. We suggest performing that check once a year.

10. Is HTF Compact® compatible with every system and coolants?

HTF Compact is designed to be applied in any system that works with water, ethylene glycol and propylene glycol (or any mixture of those) as base coolant. Our product is specially formulated to increase corrosion protection as well as sedimentation. The use of HTF Compact® is suggested for every system metallurgy since there is no compatibility issue.

11. If HTF Compact is applied to a running system, does it mean I could achieve improved cooling or heating temperature results by means of using the extra efficiency?

Yes, depending on the goals and the facility operation strategy, the extra efficiency brought by HTF Compact can lead to achieving better cooling or heating temperatures while not increasing the electrical consumption. This allows certain facilities to avoid revamping of units, and its related Capex investment, while being able to manage the increased heat load.