

SEALANT EFFECT ON TIRE TEMPERATURE

MULTI-SEAL® CORPORATION

It is quite common to hear or read that a tire sealant can “make” a tire run cooler.....as if the sealant had some magic powers to act as a coolant. This is misleading at best, and possibly downright deceptive. A sealant cannot make a tire run cooler. However, a good sealant, like Multi-Seal, can help a tire run cooler in two ways. Sound confusing? It really isn't, so read on!

There is no magic involved. It is a matter of simple physics and chemistry. As a tire rolls, heat is generated by friction between the tire and the road. Additionally, a significant amount of heat is developed by flexing of the tire tread and sidewall. Both sources of friction (and heat) increase when tire pressure decreases. Thus, slow leaks will result in higher tire temperatures.

By sealing slow leaks, Multi-Seal will help keep tire properly inflated. Both rolling friction and friction caused by flex are minimized. As stated above, friction is the major cause of heat in a working tire. Thus, by minimizing under-inflation, Multi-Seal minimizes friction and the resulting heat. Multi-Seal “allows” the tire to run cooler. To say it another way, the tire runs cooler because the Multi-Seal prevents leaks...it does it's job!

The second way that Multi-Seal helps the tire run cooler is much less important, but is real, none-the-less. As you know, all Multi-Seal sealants use a blend of water and glycol (antifreeze). By putting water, especially if it is mixed with glycols, into a tire, you increase the weight of the tire. This means that it will take longer to increase the temperature of the tire just because there is more material to heat. But, there is more. Both water and glycol have what is called a high “specific heat”. The term is no big deal. It just means that it takes more energy to raise their temperature one degree than it takes to heat something with a lower specific heat that same one degree.

It is just that simple. The water and glycol increase the amount of energy needed to heat the tire. But understand, this only slows or delays the heating. It does not change the final temperature. The tire will still heat up and will get just as hot as it would without the water and glycol in the tire! It will take a little bit longer, that's all. Multi-Seal's real benefit is pressure maintenance!

So, when you hear a competitor make claims, you can rest assured that their product is not doing something special it is not doing something that Multi-Seal can't do. They probably just don't know how or even if their product works!