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What is Puncturesafe?

• A TYRE LIFE EXTENDER/CONDITIONER, & PERMANENT PRE PUNCTURE PREVENTATIVE

Puncturesafe is a special blend of polymers which coats and clings to the inner wall of the tyre. Puncturesafe is a "permanent" puncture preventative and tyre life extender/conditioner, and we believe the only product on the market today that is guaranteed to work very long term in a high-speed tyre. Previously available products (and most current ones) have simply "fallen apart" at speeds of 40 mph and over, because they were manufactured for the construction industries slow vehicles, but eventually made their way into the high-speed markets creating problems. Puncturesafe is not a get you home product, it is applied before the puncture occurs, and permanently seals puncture after puncture in the tyre as they occur. Once installed, Puncturesafeseal not only seals punctures, it conditions the inner casing, preventing porosity leaks caused by tiny holes and cracks. In other words after installing Puncturesafe the tyres maintain correct air pressure and the need to regularly top up with air is virtually eliminated, and with correctly inflated tyres you get better fuel economy, your tyres also run cooler eliminating that killer problem of devastating heat build-up. Tyres treated with Puncturesafe last considerably longer, and unlike temporary sticky oil based sealants, Puncturesafe is water based for easy clean out if ever you need to do this. Puncturesafe is installed in minutes through the tyre valve with very little air loss and without removing any wheels

What makes Puncturesafe different to tyre sealants that have proved not to work?

Technology! Sealants have caused many problems that we at Puncturesafe have addressed. Using a highly evolved mixture of polymers, we have devised a product that is more than capable of working in harmony with today's modern breed of vehicles. We have included polymers and chemistry that bonds the molecules of the product together at speeds up to 150mph, thus allowing the driving complete flexibility. Previously available products, and most current ones, have simply "fallen apart" at around 55-65mph.

Puncturesafe's abilities & performance does not diminish with speed, distance or time.

Puncturesafe does not have any of the failings that previous and many present products have. Apart from drying and balling up in the tyre, the biggest failings of traditional tyre sealants in a high speed tyre, was the inability to seal small holes, but the ability to seal a large dangerous hole or cut, because they contained large chunks of chopped up rubber. Whereas Puncturesafe contains only tiny strands of coarse surface synthetic fibres that are stronger than steel when they interlock tightly together, but will only positively seal small holes caused by puncturing objects up to 6mm in diameter, but only in a hole that is in the tread area of the tyre, and that is shrinking in size because there is no cord damage (rubber recovery), which is 95% of today's high speed punctures. Anything bigger, or in the sidewall, with or without cord damage, and the Puncturesafe fibres just slowly bleed through the hole, giving a controlled deflation, and usually with a halt or abrupt slow down in air pressure loss at the lower pressures of 10 to 15 psi (depending on cord damage) which prevents damaged rims, and helps the driver maintain control possibly enabling continuation of the journey to remove the vehicle from a possibly dangerous location.

Through our extensive research and development efforts, our proprietary formulation has progressed far beyond the parameters of what is commonly known as a tyre sealant. Puncturesafe is a true tyre life extender and also a puncture preventative.

The Puncturesafe Research & Development Team developed an unrivalled proprietary process that has yet to be duplicated.

Puncturesafe is a proven preservative for increasing tyre longevity and retreadability and will reduce premature tyre failure.

Puncturesafe converts any pneumatic tyre into a self-sealing tyre that will maintain air pressure. Puncturesafe has the unique ability to coat the entire inner surface of a tyre and rim without succumbing to shear and stress associated with centrifugal force that is created within a high speed rotating tyre. Puncturesafe's attributes are unparalleled in the history of the pneumatic tyre.

• EXPLANATION

Once Puncturesafe has been installed, it lies dormant at the bottom of the tyre until the vehicle is first driven. Once driven a minimum of three to five miles, Puncturesafe disperses throughout the inner air cavity and forms a coating on the entire inner surface of the tyre/rim assembly. The flexing of the tyre and the normal heat build-up allows Puncturesafe to seek out and eliminate common air loss problems (referred to as porosity, air migration and bead leaks). Puncturesafe then transforms the tyre assembly into a sealed air chamber, capable of maintaining proper air pressure. Thereafter, Puncturesafe conditions the rubber in order to retard dry rot and aging (hardening) of the casing.

One treatment will provide additional longevity and cooler running tyres for the legal tread life of the tyre.

The advanced technological sealing capabilities of Puncturesafe stand on guard to seal punctures as they occur. When a tyre is punctured, Puncturesafe coats the surface of the penetrating object, thus preventing air loss.

When the puncturing object is removed, the rubber recovers and the wound immediately closes, escaping air siphons Puncturesafe into the puncture. The fibres entwine to create a clot that prevents any additional air from escaping. As the rubber recovers, the puncture closes and the strength of the tyre holds the seal in place. The specialised polymers and fibres form the seal, thereby producing an airtight seal. The small amount of Puncturesafe that penetrates through the puncture, past the belts and out through

the tread area is referred to as a seal. Once exposed to the atmosphere, the seal begins a systematic chemical cure (another proprietary attribute from the Puncturesafe R&D Team). As the seal cures, it makes a positive secure seal that is impervious to water, which totally protects the belts and inner casing from outside contaminants and corrosion.

Puncturesafe's proprietary formulation is one of our closely guarded secrets, which allows Puncturesafe to withstand heat and the shear forces created within a rotating tyre. The thixotropic polymers stretches and recovers under mild to severe exposure of the adverse forces and continuously clings to the inner surface of the tyre/rim. The ability to evenly coat the inner surface against adverse conditions and centrifugal force is the reason that Puncturesafe will not adversely affect a balanced tyre/rim assembly and does not lose the ability to provide protection for the tread life of the tyre. Puncturesafe's operating temperatures under normal conditions range from -35°C to + 150°C.

Puncturesafe's abilities & performance is not diminished with speed, distance or time.

• SEALING CAPABILITIES

If the tyre's integrity is weakened to a point where the tyre and casing are unsafe, Puncturesafe is designed to bleed and slowly release air pressure in a controlled way if the puncturing object has severely damaged the inner structure.

Puncturesafe will not hide or mask a dangerous puncture regardless of how small the damage may be. If the integrity of the casing has been breached and safety becomes an issue Puncturesafe is designed to allow air to escape in a controlled manner.

• COATING AND CONDITIONING

Puncturesafe coats and clings to the tyre's entire inner air cavity, conditioning the inner surface, eliminating air migration caused by porosity and bead leaks.

It is imperative that the proper amount of Puncturesafe be installed in a tyre (refer to application chart). In order for Puncturesafe to function, the vehicle should be driven approximately 3 to 5 miles (it is not required to immediately drive the vehicle). This initial driving allows the tyre to warm up and for Puncturesafe to distribute. Unlike conventional tyre sealants, Puncturesafe has been developed to prevent migration from the rim and sidewalls to the tread area at high speeds.

• STANDS ON GUARD

Once the initial driving/usage period has been attained; Puncturesafe will be thoroughly distributed throughout the entire inner surface of the tyre/rim.

Puncturesafe is a proprietary liquid coating that never deteriorates within the tyre and will continuously stand on guard to protect tyres against air loss for the legal tread life of the tyre.

• WILL NOT CURE OR HARDEN INSIDE OF THE TYRE

People often ask, "If Puncturesafe cures from exposure to outside air, then why doesn't it cure by the air inside of the tyre?" Puncturesafe transforms the tyre and rim into a sealed air chamber. As the vehicle is driven and the temperature of the tyre increases, a portion of the liquid base vaporises within the tyre assembly's inner air cavity, as the tyre cools, the moisture condensates back into the formula. The inside air actually becomes part of the system. The sealed air chamber prevents outside air from entering or inside air from escaping. Constant air pressure maintenance is not required.

• POSITIVE SECURE SEAL

When a tyre is punctured, Puncturesafe is forced against and around the puncturing object by the inner air pressure, thereby preventing air from escaping. If the puncturing object is thrown out of the tyre by centrifugal force or is pulled out, the inside air forces Puncturesafe into the puncture and immediately stops air loss. Special fibres entwine, forming a seal, then as the rubber recovers, aided by the tyre flexing as it rotates, the inner air pressure forces the seal well into and through the puncture. Once Puncturesafe is exposed to the outside air, a curing process begins. The cured seal extends well into the puncture, thus providing a seal that is impervious to water (rain, snow, mud, etc.).

As this seal cures, it is transposed into a permanent rubberised seal, protecting the inner casing and steel belts against contaminants entering the puncture. No other tyre sealant manufacturer has ever been able to duplicate the Puncturesafe attributes

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