



ULTRA-SEAL

THE ULTIMATE TYRE LIFE EXTENDER



Extreme reduction in operational costs

Suitable for the whole Commercial Vehicle Market

www.ultra-seal.eu



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WHAT IS Ultra-Seal

'The ultimate tyre life extender' is a preventative tyre sealant liquid which is invented to protect tyres from leakage, punctures and blowouts. When inserted into a tyre, it repairs most punctures from the inside out. You won't have to experience a breakdown and you will not even know you had a puncture. The product creates a repair and keeps working for the life of the tyre.

Ultra-Seal converts any pneumatic tyre into a self-sealing tyre that will maintain air pressure. Ultra-Seal has the unique ability to coat the entire inner surface of a tyre and bead. It ensures heat reduction and by maintaining the tyre pressure it also extends the life of the tyre, minimises tyre wear and reduces fuel consumption. Ultra-Seal's attributes are unparalleled in the history of the pneumatic tyre!

THE BENEFITS

- It seals most punctures as they happen
- It ensures heat reduction
- By keeping the air pressure in the tyre it:
 - extends tyre life
 - minimises tyre wear
 - reduces fuel consumption
- It continues working during the complete life of the tyre without having to undergo extra maintenance
- Ultra-Seal is environmentally friendly
- Provides an extra safety factor for the driver

TYRE HEAT REDUCTION - THE #1 KILLER OF TYRES

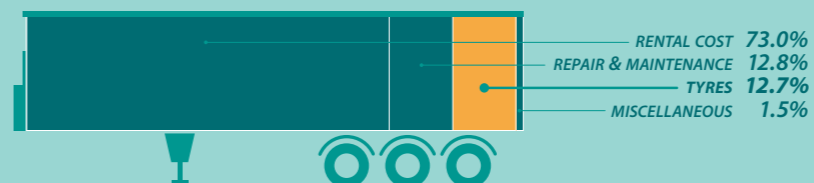
Ultra-Seal assists in protecting tyres from devastating heat buildup which is associated with friction caused by underinflation or overloading. Ultra-Seal contains specific ingredients that aid in conducting heat away from the tyre, by transmitting additional heat to the rim (which is the tyre's natural heat sink), resulting in a cooler-running tubeless tyre for any type of equipment or vehicle, regardless of mission profile. It is the ultimate thermic conductor!

FEWER PUNCTURES AND BLOWOUTS

Breakdown service costs for punctures and blowouts are very high. Often the tyre cannot be recovered, and together with the breakdown handling and the mobile service, the breakdown costs can be as high as 1500 euros on a French highway. Add to that the vehicle downtime, missed delivery time, and sometimes even penalties for late delivery, and let's not forget the safety aspect.

Tyre sealant products have a rich history. The Ultra-Seal product has over 40 years of operation history, and has become what it is today through years and years of development, optimisation and continuous tests in several applications. The formula is so unique and unrivalled, that a wise decision has been taken to never patent the product; only in this way, the product and its ingredients are the best kept secret in the world of tyre sealants.

Cost structure for trailer operation



It is normal that breakdowns account for as much as 5% of total tyre-related incidents, but account for 25% of the total tyre cost in a trailer fleet.



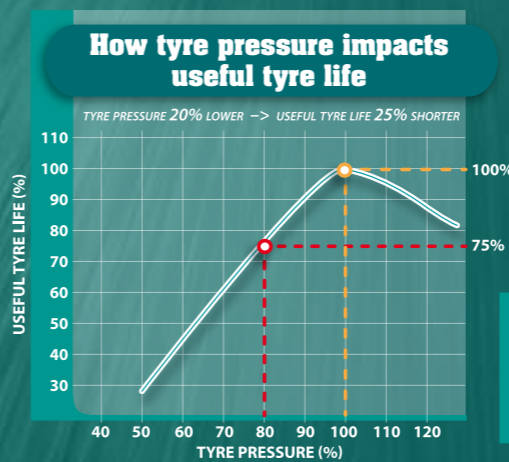
BETTER TYRE PRESSURE — EXTENDING TYRE LIFE

After heat and punctures, low tyre pressure is the main tyre killer. Tyre life is very dependent on the correct tyre pressure. Tyres lose pressure over time, because of porosity in the tyre and small air leaks between the tyre bead and the rim, and the valve and the rim. Underinflation also causes an excessive deflection of the tyre side walls, which generates stress in the casing. This stress also leads to fatigue and eventually blowout. The deflection of the side walls also leads to irregular tyre wear.

Ultra-Seal forms an air-tight layer over the entire inner surface of the tyre, thus preventing most air loss due to the natural porosity in a tyre, as well as the air loss between the bead of the tyre and the rim.

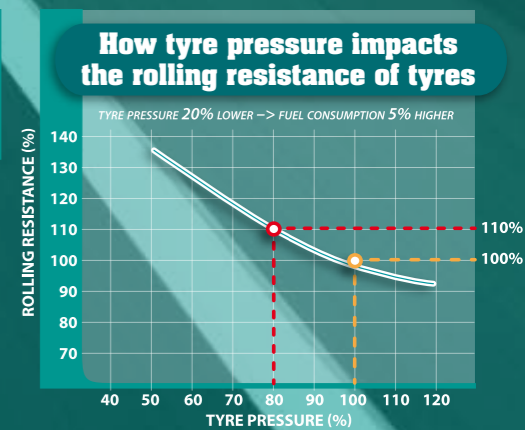
Ultra-Seal has the ability to eliminate porosity, air migration and seepage, thereby allowing the tyre to maintain proper air pressure, preventing the inception of most tread separations and zipper ruptures.

Because Ultra-Seal covers the inner surface of the tyre, it seals it and keeps the tyre pressure. That is also why tyre pressure adjustments will not be required as frequently, thus saving expensive tyre maintenance costs. The cost of Ultra-Seal in a tyre is less than 10% of the cost of the tyre, and it lasts for the life of the tyre, which equals savings every day.



Underinflation increases stress on tyre sidewalls and increases heat buildup due to increased rolling resistance; both of which can lead to tyre failure.

When tyres are underinflated, the tyre life is reduced for a number of reasons i.e. heat buildup, increased stress in tyre side walls, excessive tyre wear and also increased fuel consumption due to higher rolling resistance.

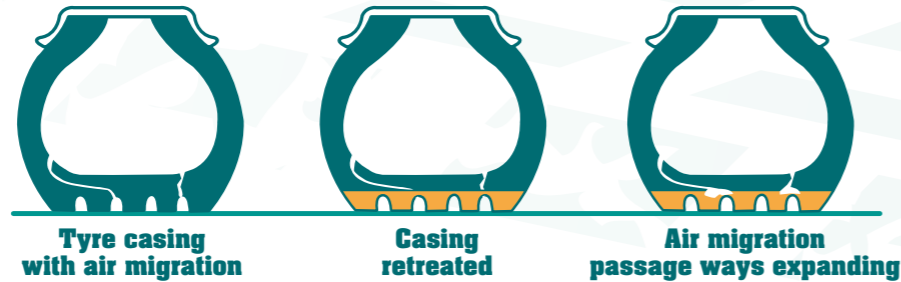


Excessive heat buildup due to underinflation can lead to ply separation in the tyre casing, causing fatigue and eventual blowout.

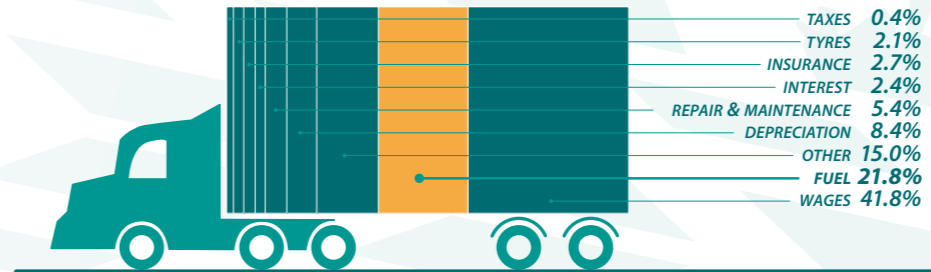
The fatigue in the tyre casing, caused by driving with underinflated tyres for the full life of the tyre, is not always visible during casing inspections. When retreading the tyres this then goes undetected but it will be a weak spot in the tyre that may cause a tyre failure.

By using Ultra-Seal, a puncture will immediately be repaired, which keeps the risk of casing damage to a minimum.

Ultra-Seal functions like a thermal conductor that leads the heat away from the stress area and helps to preserve the casing.



Cost structure for international transport



Fuel consumption is the biggest viable cost for a truck, so fuel savings have the biggest impact.



REDUCED FUEL CONSUMPTION

Driving with underinflated tyres results in increased rolling resistance, which leads to extra tyre wear and –even more important– will have an extreme impact on fuel consumption. Correct tyre pressure is key to low rolling resistance and thereby low fuel consumption. 20% underinflation increases fuel consumption by up to 5%!

That means that minor reductions will already lead to big savings. For example, if a truck drives 10,000 km per month, with just 1% fuel reduction due to Ultra-Seal, it will mean a saving of 500 euros per year. **The average Ultra-Seal saving on fuel consumption is 3%. You can calculate the enormous impact it has!**

ADDITIONAL BENEFITS OF **Ultra-Seal**

IT LASTS FOR THE LIFE OF THE TYRE

Ultra-Seal contains Thixogel™ a proprietary process that protects the sealant against heat and provides the ability to overcome the centrifugal force of a rotating tyre. Ultra-Seal performance is not diminished by speed, distance or time.

IT PROTECTS THE ENTIRE INNER SURFACE OF THE TYRE

Ultra-Seal's Thixogel™ provides a coating that clings to the entire surface of the tyre-rim assembly. The sidewalls, including every square centimetre of the inner air cavity, retain an approx. 2-3 mm coating of the product, thereby providing protection to the tyre at all times.

IT PROVIDES AN EXTRA SAFETY FACTOR

Ultra-Seal provides safety factors that are not found in any tyre. Ultra-Seal will not mask or hide damage that has breached the integrity of the tyre. Ultra-Seal is specially formulated to allow any serious puncture (potentially dangerous) to slowly bleed air and Ultra-Seal out of the wound, thereby allowing the tyre to deflate in a controlled manner. This attribute provides safety and aids in alleviating the hazards associated with blowouts.

IT EXTENDS TYRE LIFE

Ultra-Seal has been tested and proven to maintain air pressure, retard aging within the casing, reduce heat buildup and increase tyre life with an average of 25% and higher in most cases.

IT INCREASES RETREADABILITY

Ultra-Seal has the ability to protect against the inception of tread and ply separations caused by air migration between the plies of new and retread tyres, thereby resulting in additional retread cycles and extended casing life.

IT RETARDS DRY ROT AND CASING DEGRADATION

Ultra-Seal has the ability to retard dry rot and aging from within the tyre, which increases the life of any tubeless tyre casing.

IT IS WATER-SOLUBLE - FOR EASY CLEAN UP

Ultra-Seal is completely water-soluble in its liquid state, and leaves no residue when rinsed with plain water. Yet it will not dissolve within a wound after it has cured. Standard repairing procedures can be utilised without additional effort.

IT PROTECTS AGAINST RUST AND CORROSION

Ultra-Seal contains a complete rust and corrosion inhibiting system that not only protects steel and alloy wheels, but in a wound, Ultra-Seal's proprietary process will also protect steel belts. Outside contaminants are prevented from leaching back into the wound which would cause the steel belts to rust and the plies to separate. Without Ultra-Seal's protection, the contaminants would quickly destroy valuable casings.

IT CANNOT CREATE A BALANCE PROBLEM

Ultra-Seal cannot create an out of balance situation. If the tyre and rim are in proper condition prior to inserting Ultra-Seal and neither are out of round, then there will not be a change in performance. Most tyres do not require balancing. Tyres that do need balancing, should be balanced before inserting Ultra-Seal. If a problem exists then Ultra-Seal may aggravate the situation, which acts as a safety warning alerting the driver that there is a tyre, rim or suspension problem that pre-existed.

IT WILL NOT VOID ANY TYRE WARRANTY

Ultra-Seal has documents from major tyre manufacturers stating that Ultra-Seal does not void their warranties. In over 40 years of business there has never been a report of Ultra-Seal causing a new tyre warranty rejection or a retread casing rejection. Ultra-Seal's composition is completely compatible with all tyre components.

IT IS COMPATIBLE WITH ALL RETREAD METHODS

Ultra-Seal conditions the casing and retards aging. Plus, the ability to be thoroughly cleaned out of the tyre assures no hindrance for inspection. The product is non-hazardous, non-flammable, does not present a disposal problem and has no compatibility problems.





APPLICATIONS OF **Ultra-Seal**

Ultra-Seal can be used for all commercial vehicles, from light trucks to heavy mining equipment.

Ultra-Seal not only gives a fantastic return on investment due to its tyre life extension capabilities, but in some sectors like the mining industry, agricultural sector and construction industry it can be almost impossible to fix a puncture and it costs a fortune in lost production time, all of which can be overcome by using Ultra-Seal.

Ultra-Seal is delivered in 2 different grades developed specifically for each user application:

Extra Heavy Duty (XHD) for light vans up to 7500 kg (high-speed), trailers, trucks and buses over 7500 kg (high-speed), as well as bigger machines moving at speed.

This Ultra-Seal application is designed for on-road vehicles up to 7500 kg with pneumatic tyres, used on vehicle tyres that travel at highway speed. This formula will seal punctures caused by puncturing objects up to 6 mm in diameter.

This Ultra-Seal application is also designed for large trucks, trailers, buses and bigger machines. For these applications, where increased protection is required - sealing up to 12 mm - it is recommended for use in vehicles that travel at highway speed.

Extreme Heavy Duty (EHD) for mining, construction equipment and agricultural vehicles (low-speed), military combat vehicles and off-road vehicles and equipment.

This Ultra-Seal application was originally designed for use in the mining industry. This product is also proving to be very effective in everything from heavy construction vehicles to agricultural tractors and equipment. For slow moving construction vehicles, it seals punctures up to 12 mm. Here, Ultra-Seal provides that extra reliability and very important uptime on mining and construction equipment, where downtime is extremely costly. It can be used in combat vehicle tyres where bullet wounds would prevent any vehicle from completing its mission. Ultra-Seal is capable of sealing large wounds, thereby allowing vehicles to maintain mobility.



PRODUCTS AND TOOLS

Several product sizes, insertion pumps and tools are offered to accommodate the different usage extents, wheel configurations and workflow requirements. Choose your applicable product and tools here.

THE ULTRA-SEAL PRODUCT COMES IN 2 DIFFERENT FORMS

A drum of 18.9 litres, usually to be inserted using a manual pump.

18.9 litre drum – Part 500502 (XHD) and Part 600502 (EHD)



The other Ultra-Seal volume variant that is available is a drum of 208 litres, possibly positioned on a trolley for mobility, and usually to be inserted using an automatic pump.

208 litre drum – Part 505502 (XHD) and Part 605502 (EHD)



ADDITIONAL PUMPS AND TOOLS



Manual pump for the 18.9 litre drum Part 3610045



Automatic air-operated pump for the 208 litre drum Part 900045



Extended manual pump for the 208 litre drum Part 3620045



Faucet for the 208 litre drum Part 900044



Trolley for the 208 litre drum Part 8150



Indicator strips Part 7150



Large Bore Chuck Part 000200



Valve Core Remover tool Part 003646





INSERTION **PROCESS**

Inserting Ultra-Seal is a clean, fast and simple process and can be done in 3 different ways

- *By manual pump*
- *By automatic pump*
- *Directly into the tyre when the new tyre is fitted onto the rim*

Basically, once Ultra-Seal has been inserted into the tyres, no maintenance is needed for the life of the tyre! Only the normal routine of visible inspection of a tyre, to check for damage, and adjustment of the tyre pressure once a year when it has to go to the workshop for preventative maintenance and the authorities test anyway, are all it takes.

When the end of the tyre's life is reached and tyres go into the recycling process, a tyre with Ultra-Seal can perform the same as any other tyre without sealant in it. The Ultra-Seal product is environmentally friendly and can be rinsed with just a little bit of water.



AVAILABLE FROM
Stock

Ultra-Seal is suitable for the whole Commercial Vehicle Market. The product and its accessories are available from stock and will be delivered to European customers from the central warehousing facility in Belgium. Furthermore, several service centres and dealers in Europe are equipped to supply and insert the Ultra-Seal product for external freight forwarders and hauliers.

with Ultra-Seal

without Ultra-Seal

TESTED ALL OVER The World



Ultra-Seal has been tested numerous times, in test laboratories and in real life. The many loyal customers worldwide are of course proof in and of itself that the product works very well.

The most recent and also the biggest test that was conducted, was carried out by DSV, one of the world's largest transport companies with its own fleet in Europe, consisting of 8500 trailers.

After preliminary tests of the 3 biggest tyre sealant brands, where the brand Ultra-Seal stood out by far with the most promising results, DSV decided to carry out a large scale test in order to be absolutely sure of the results before applying tyre sealant in all vehicles.

The large scale DSV test was based on 500 new trailers without Ultra-Seal against 500 new trailers with Ultra-Seal from the start. The test ran for 9 months from May 2015 to February 2016 in order to measure performance under different climate conditions. All the trailers had been used for mixed traffic, all over Europe and with an average number of 72000 km per year. All trailers were fitted with GT tyres.

The overall result shows 75% less punctures, blowouts and other tyre incidents on the trailers with Ultra-Seal. In other words, when directly compared, Ultra-Seal resulted in a reduction from 113 to 28 tyre incidents.

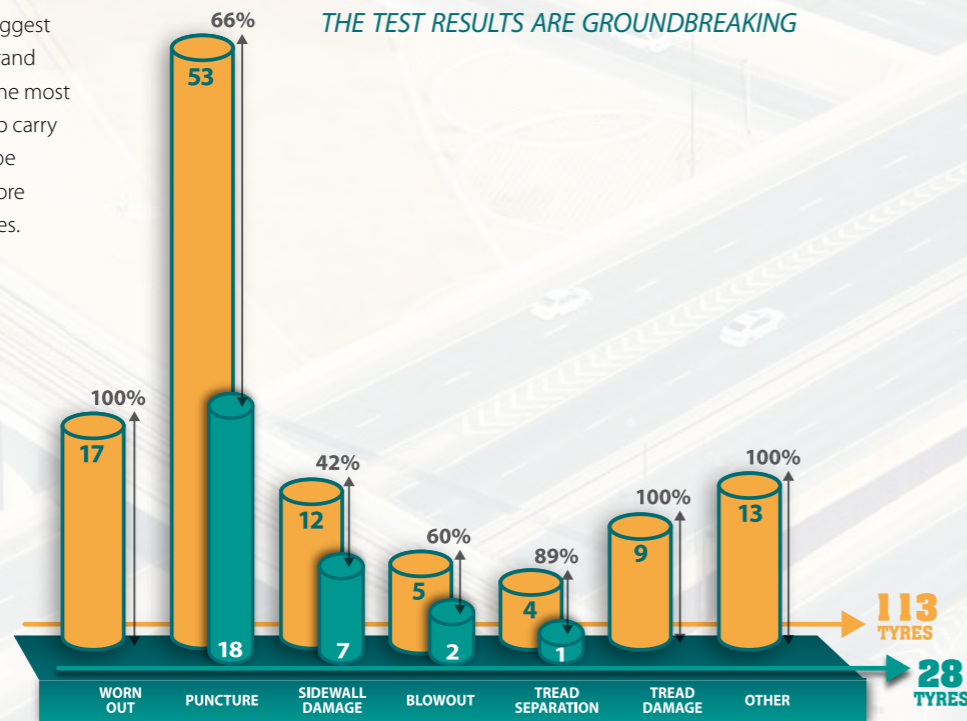
These figures indicate that about 5.5% of the tyres without Ultra-Seal will suffer a breakdown in the course of a year. Only less than 1% of the tyres with Ultra-Seal will suffer a breakdown in the course of a year.

In terms of money: as DSV's average costs for a breakdown are 528 euros, it means a saving of more than 1.5 million euros per year for their fleet of 8500 trailers, which is more than three times the cost of equipping the tyres with Ultra-Seal!

At the same time, the tyres with Ultra-Seal had lost less than 5% air pressure while the tyres without Ultra-Seal had lost between 10 and 15% air pressure. According to tests by tyre manufacturers, this means that the tyres with Ultra-Seal last 10 to 20% longer than the tyres without Ultra-Seal, because of the better tyre pressure.

DSV does not operate its own trucks, so the test did not include fuel savings. However, according to research and results, fuel savings will also be significant due to reduced pressure loss and possibly even bigger than the savings on both breakdown and reduced tyre wear.

THE TEST RESULTS ARE GROUNDBREAKING



The Ultra-Seal team has been working in the tyre industry for decades, directly or indirectly. Their experience in the automotive industry has ensured that they kept looking for the right product to make their appearance on the European market. With Ultra-Seal, they found what they were looking for. Visit www.ultra-seal.eu to find out all there is to know about Ultra-Seal: The Ultimate Tyre Life Extender!



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