



**Tire vaccine against punctures**

# **Product Catalogue**





# Tire Vaccine

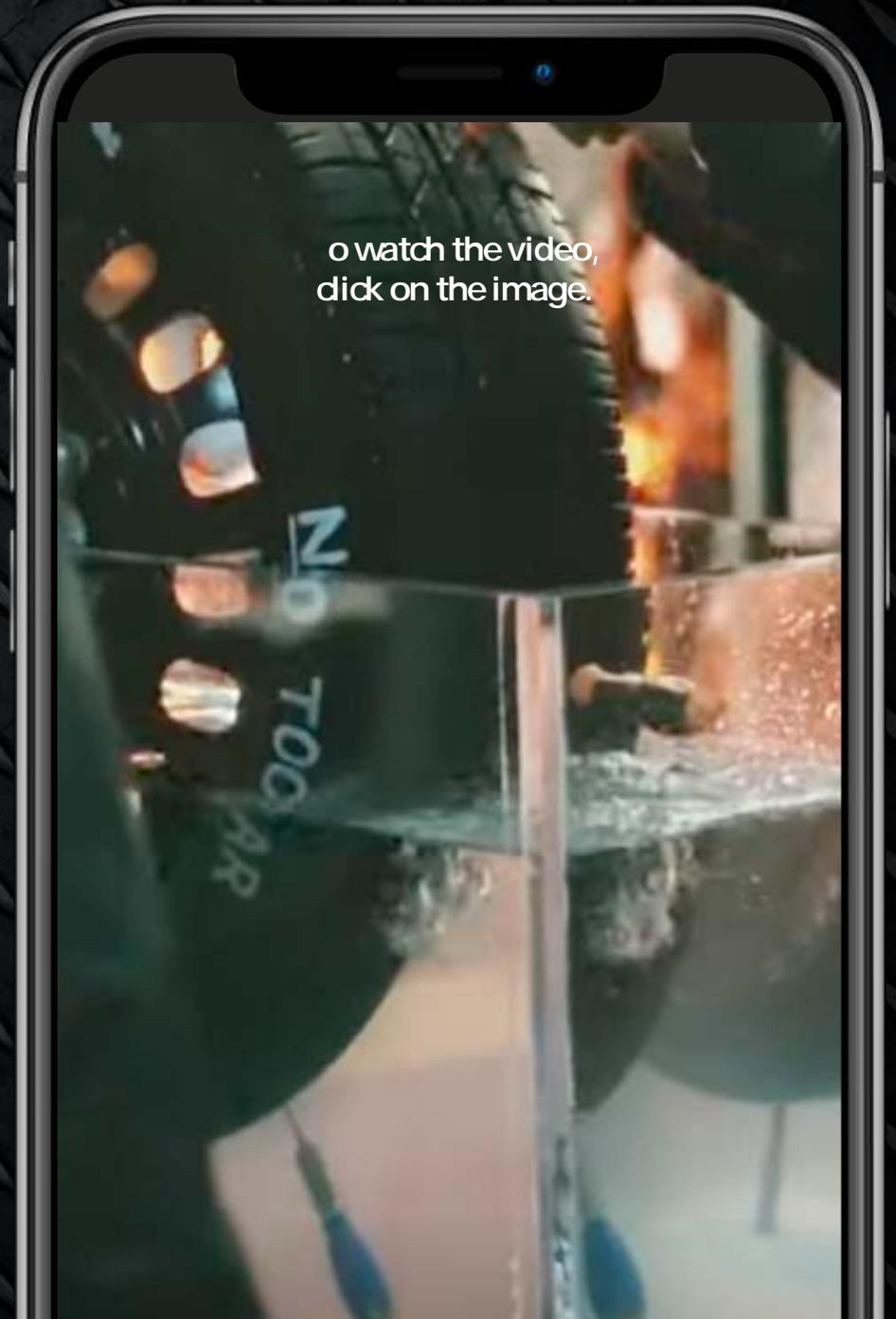
# Xtire™

PIERCED, SPINED, SEALED!

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Tires protected 24 hours a day against holes and loss of pressure.

With Xtire you won't even realise the tire popped.





**VACINA**<sup>®</sup>  
DE PNEU

**X**tire<sup>™</sup>

INNOVATION

*INNOVATION FOR YOUR SECURITY, ECONOMY AND COMFORT*



**xtire**<sup>TM</sup>

## The Company

Xtire is a Brazilian company present in multiple countries and world leader in the manufacturing of tire sealant against holes, ecologically correct, for trucks, OTR equipment, agricultural and industrial, also automobiles, motorcycles, bicycles.

Xtire is a company completely focused on ESG practices.

The product seals undesired holes automatically in tires providing Security, Economy and Comfort to our clients



### Mission

Develop and distribute products for vehicles that provide safety, economy and comfort.



### Vision

To be recognized for the quality, safety and reliability of its products.



### Values

Integrity, ethics, trust, respect, innovation, sustainability, commitment and human appreciation.



### Sustainability

Concerned about environmental issues and safety, Xtire sealants are biodegradable, non-toxic and non-flammable. New packaging with 90% less plastic.

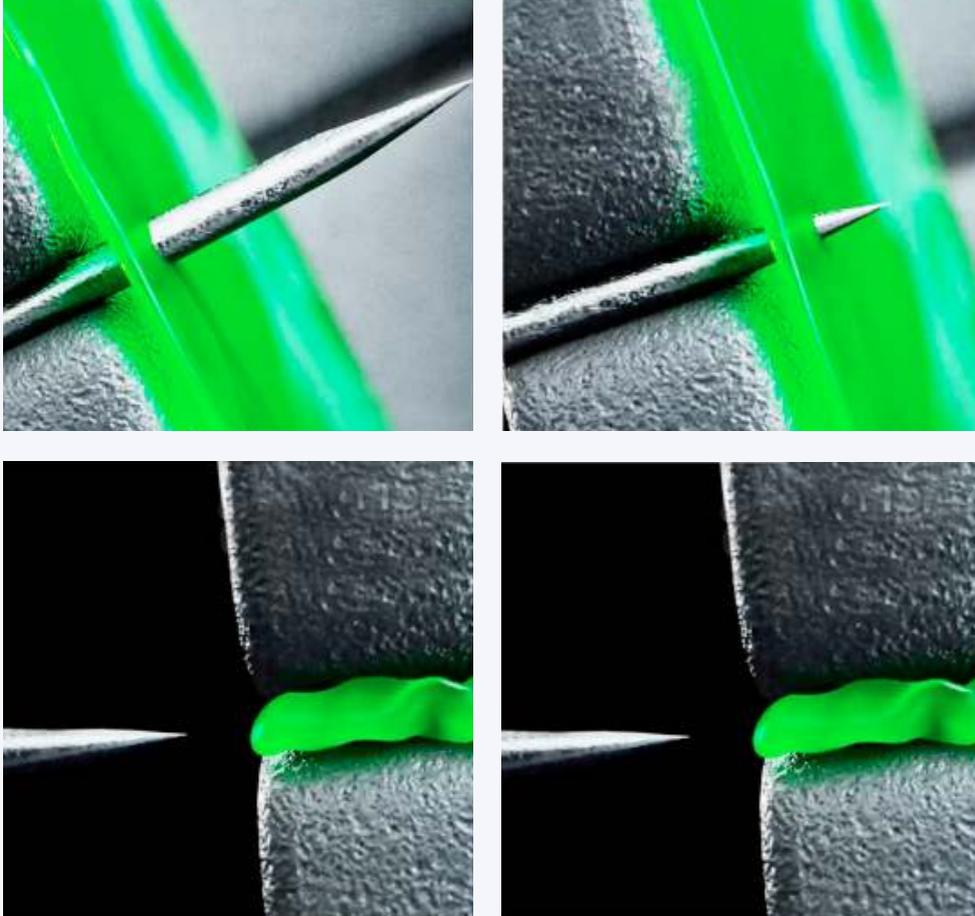
**Minimize downtime, maximize tire life and fuel economy.**

## HOW IT WORKS

Tire Vaccine's exclusive formula instantly seals tire punctures from the inside out, preventing pressure loss.

The movement of the wheels causes the product to create a thin protective layer inside the tire or inner tube.

When a puncture occurs, the air pressure inside the tire forces the fibers and adhesives, present in the sealant, into the hole channel, thus sealing it.



# ECOLOGICALLY CORRECT PRODUCT



## IT IS PREVENTIVE

The product is applied BEFORE the tire goes flat and acts from the inside out automatically, avoiding accidents, delays and inconveniences. In addition, it keeps the tires calibrated for a longer time, which helps to reduce fuel consumption and premature tire wear.



## IT IS NOT TOXIC

Our products are biodegradable, non-toxic and non-flammable.



## LESS CO2 IN THE ATMOSPHERE

Well-inflated tires help reduce vehicle fuel consumption, which leads to lower carbon dioxide (CO2) emissions into the atmosphere.



## DOES NOT GENERATE VIBRATIONS

The wheels remain perfectly balanced even at high speeds due to the advanced Xtire Tire Vaccine formula.



## LESS RUBBER IN NATURE

Tires with the correct pressure wear less and last longer. Rubber is a natural resource that can take years to decompose, so reducing its consumption is good for the environment. In addition, rubber production can cause significant environmental impacts.



## DOES NOT CONTAIN MONOETHYLENE GLYCOL (MEG)

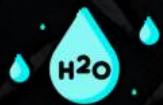
The sealants on the market, compounds based on GLYCOL, are toxic and corrosive, which is why they negatively affect the chemical composition of the inside of the tire to the detriment of its useful life, drying it out over time and cracking it from the inside out.

This same Monoethyleneglycol, exposed to high temperatures, ends up adhering to the tire rubber, being very difficult to remove and, worse, preventing it from being reformed.

On the other hand, tire retreaders reject products with GLYCOL because, when placed in the autoclave, which is where the new tread is glued, they burst inside the machine.

## WATER-BASED FORMULA (H2O) WITH ANTIOXIDANTS

Xtire is based on water (H2O) and contains antioxidants that prevent the corrosion of the metallic parts of the tire and wheel, in addition to reducing the internal temperature of the tire, which helps to increase its useful life and preserve its structure.



# LABORATORY TEST SHOWS 90% BIODEGRADABLE IN JUST 28 DAYS

XTIRE is considered an easily biodegradable product

**GRUPO ecolyzer**  
RELATÓRIO DE ENSAIO

**DETERMINAÇÃO DA BIODEGRADABILIDADE IMEDIATA  
PELA MEDIDA DE DÍOXIDO DE CARBONO  
DESPRENDIDO EM SISTEMA FECHADO  
B2 - 047189.C**

Cliente: XGLOBAL IND COM IMP E EXP EIRELI - EPP  
Endereço: R VILA NOVA, 340 - GR 12955-000 BOM JESUS DOS PERDÕES - SP  
Protocolo Ecolyzer: 047189.C  
Início do Processo: 20/12/2017  
Recebimento da Amostra: 20/12/2017  
Início do Ensaio: 19/01/2018  
Término do Ensaio: 16/02/2018  
Emissão do Relatório: 08/03/2018  
Amostra: SELANTE DE PNEU XTIRE  
Composição Química Declarada: (%) - água: 60; partículas sólidas: 29,16; fibras: 5; aditivos: 5,32; polímeros absorventes: 0,44; corante: 0,08.  
Quantidade de amostra recebida (mL ou g): 558,00  
Lote/Val / Fab. Declarada: 342/343 08/12/2021 09/12/2017  
Quantidade de amostra utilizada (g ou mL): 0,6

**METODOLOGIA**  
A amostra foi incubada em frascos âmbar contendo meio mineral e inoculo durante 28 dias.  
As leituras foram realizadas em dias pré-estabelecidos, utilizando-se o CO<sub>2</sub> dissolvido em hidróxido de bário até o ponto de viragem. Analisam-se controles negativos e positivos em paralelo.  
POP-LFQ 59.04 Ensaio de Determinação da Biodegradabilidade Imediata - Sistema Fechado

**CONDIÇÕES DO ENSAIO**  
Temperatura de incubação: 24 - 25 °C  
Tempo de incubação: 28 dias

**TITULOMETRIA**  
A amostra apresentou um grau de biodegradabilidade de 90,00%

**RESULTADO**

**GRUPO ecolyzer**  
RELATÓRIO DE ENSAIO

**DETERMINAÇÃO DA BIODEGRADABILIDADE IMEDIATA  
PELA MEDIDA DE DÍOXIDO DE CARBONO  
DESPRENDIDO EM SISTEMA FECHADO  
B2 - 047189.C**

**CRITÉRIO DE ACEITAÇÃO**  
A amostra deve atingir um mínimo de 60% de biodegradação em 10 dias após atingir 10% de biodegradação inicial.  
O controle utilizando glicose deve apresentar um mínimo de 60% de desprendimento de CO<sub>2</sub> teórico num intervalo de 10 dias após atingir 10% de biodegradação.  
O ensaio de inibição deve atingir um desprendimento mínimo de 25% de CO<sub>2</sub> no mesmo intervalo e condições referentes ao controle biodegradável (glicose).

As opiniões e interpretações expressas abaixo não fazem parte do escopo da acreditação deste laboratório.

**CONCLUSÃO**  
A amostra foi considerada facilmente biodegradável.

**CONCLUSÃO**

Juliana B. A. Omaghi  
Juliana Brito Amaro Omaghi  
Analista Responsável  
CRQ 04491241-IV Região

Gláucio Pereira Machado  
Gláucio Pereira Machado  
Gerente Técnico  
CRMV - SP: 20396

LABORATÓRIOS ECOLYZER LTDA.  
Rua Pedro Pinheiro, 100 - Vila das Maças - São Paulo - SP - Brasil - CEP 04491-000 - Tel: (11) 3485-9320 - ec@ecolyzer.com.br - www.ecolyzer.com.br

**RESULTADO**  
A amostra apresentou um grau de biodegradabilidade de 90,00%

**CONCLUSÃO**  
A amostra foi considerada facilmente biodegradável.

# Products



XTIRE Tire Vaccine has 6 different formulas, developed specifically for each type of vehicle.1

- XTIRE Bike
- XTIRE Moto
- XTIRE Auto
- XTIRE Frota Max
- XTIRE Agroforte
- XTIRE Defense



# MAIN BENEFITS



01

Seals holes instantly.



02

Maintains calibration for longer.



03

Saves fuel.



04

Protects and extends tire life.



05

Allows you to calibrate tires with Nitrogen.



06

Easy, fast and clean application.

# MAIN CLIENTS • HEAVY LINE



# MAIN CLIENTS - LIGHT LINE





Xtire™

ACINA®  
DE PNEU  
BIKE



# ACINA<sup>®</sup> DE PNEU BIKE

Instantly seals punctures in **tube tires**  
and  
**tubeless** (no tube).

# Tire Vaccine

## BIKE

**A flat tire while pedaling to work, home or during leisure is always very unpleasant.**

One pack allows you to apply to 2 tires and can be used on all types of bikes, except Speed models.

Application is easy, quick and clean, without the need to disassemble the tire and wheel.

It does not require changing the sealant periodically, as it does not contain ammonia.



## SPECIFICATION

With the bike in motion, the puncture is instantly sealed.

If the tire loses pressure, just inflate it and keep pedaling.



- One pack allows you to apply to 2 tires;
- Apply half to each tire observing the 50% mark shown on the package;

50%  
190gr

- Can be applied to tubeless and tubeless tires
- Sealing capacity (diameter of the flat perforating object) in tubeless tires: up to 2mm and in tube tires: up to 1.5mm;  
Preventive product: apply before the tire goes flat;
- Ecologically correct: biodegradable, non-toxic and non-flammable;
- Comes with an exclusive valve puller keychain;  
Can be applied to Schrader and Presta valve tires with removable
- valve core;
- Application in tubeless tires with Presta valve without removable core, must be done directly on the tyre;
- Not recommended for Speed model bikes.

## NEW PACKAGE



- More economical.
- Application for 2 tires.
- Modern and striking look. Application even
- easier and faster. No applicator required.
- All you have to do is open the cap and screw
- on the new and exclusive application hose
- that makes it easy to fit the valve. It comes
- with an exclusive valve puller keychain.
- Even greener packaging with 90% less
- plastic.

## HOW TO APPLY THE PRODUCT



**SHAKE THE PACKAGING VIGOROUSLY FOR 20 SECONDS TO HOMOGENIZE THE PRODUCT, DISTRIBUTING ITS INGREDIENTS EVENLY, SO THE PRODUCT IS MORE LIQUID, FACILITATING THE APPLICATION PROCESS.**

- Remove the application hose and the valve puller keychain from the packaging;
- Remove the cap and thread the application hose; Remove the valve core using the valve puller key (Schrader valve only - thick nose);
- Wait for the tire to deflate completely;
- Firmly attach the delivery hose to the air valve (Presta valve with removable core: after removing the core, fit the hose into a Schrader valve adapter and follow the remaining steps);
- Slowly inject the entire contents of the pack;
- Apply an air jet inside the valve to eliminate sealant residues; Reinstall the valve core;
- Calibrate the tire following the bicycle manufacturer's recommendation;
- Replace the cap to protect the valve from dirt and moisture.
- 





## ATTENTION

- Seals holes only in the tread; Works with a minimum pressure of 20 PSI;
- Does not seal tears or cuts;
- Does not seal holes in the sidewall and shoulder of the tire; Do not apply to Speed tires;
- Do not apply to tires and tubes with a cold patch.

## ADDITIONAL INFORMATION

- Packing type: pouch
- Content: 350ml
- Gross Weight: 400g
- Dimensions: 210 x 105 x 50 mm
- Product validity: 6 years



# COMPARATIVE BETWEEN THE BIKE XTIRE TIRE VACCINE VS. LATEX-BASED SEALANT

MAIN POINTS		SEALANT BASED ON LATEX
Base of sealant formula	Water + Antioxidants	Latex (contains ammonia)*
Tire types (compatible)	With tube and tubeless	tubeless only
market breadth	100% of Bikes in Brazil	Less than 5% of Bikes (restricted to tubeless)
Durability /Re-application	Lasts the life of the tire or tube	Dries out after 2 months (maximum)
Tire and Rim Damage	It DOES NOT affect the rubber of the tire or the tube, it protects the metallic parts (Rim).	YES, as Ammonia is highly corrosive to tire rubber.
Cleaning /Product Removal  Click on the icon to watch the cleaning video.	Easily removed with water. Process takes less than 1 minute.	Difficult to remove, as the LATEX dries out and sticks to the tread. Process takes 1 hour per tire (Important: removal is CHARGED)
Types of Valves (Compatible)	Americana (Schrader) and Presta	Americana (Schrader) and Presta
Application Method	By valve or bead (when Tubeless)	By valve or bead (when Tubeless)
Maintaining Pressure Against Natural Losses (WITHOUT BEING HOOKED)	Tubeless or tube tires lose pressure naturally, especially on bikes that are very thin. With the TIRE VACCINE, this loss of pressure is drastically reduced, that is, your Bike will always be ready for use.	NOT APPLICABLE

(\*) Ammonia



Over time, ammonia causes degradation of rubber and tire structure, reducing their durability, causing premature aging and leaving them more vulnerable to damage.

## PRODUCT APPLICATION VIDEO



Clique no ícone para  
assistir ao vídeo.



Xtire™

ACINA®  
DE PNEU

MOTO



**ACINA**<sup>®</sup>  
DE PNEU  
**MOTO**

Instantly seals punctures in tubeless  
and tubeless tires.

# Tire Vaccine **MOTO**

**Make the most of the pleasure of riding your motorcycle without worrying about flat tires.**

**The dose is the same for all types of motorcycles, regardless of model and displacement.**

**Application is easy, quick and clean, without the need to disassemble the tire and wheel.**



# SPECIFICATION

With the bike in motion, the hole is instantly sealed.

If the tire loses pressure, just inflate it and keep riding.



- Apply one pack per tire
- Can be applied to tubeless and tubeless tires
- Sealing capacity (diameter of smooth piercing object):
  - Tubeless tires: up to 4mm
  - Tube tires: up to 2mm
- Preventive product:
  - Apply before the tire goes flat
- Ecologically correct:
  - Biodegradable
  - non-toxic
  - Non flammable
- Comes with exclusive valve puller keychain

# NEW PACKAGE



- More economical.
- Modern and striking look.
- Application even easier and faster.
- No applicator required.
- All you have to do is open the cap and screw on the new and exclusive application hose that makes it easy to fit the valve.
- It comes with an exclusive valve puller keychain.
- Even greener packaging with 90% less plastic.

# HOW TO APPLY THE PRODUCT



**SHAKE THE PACKAGING VIGOROUSLY FOR 20 SECONDS TO HOMOGENIZE THE PRODUCT, DISTRIBUTING ITS INGREDIENTS EVENLY, SO THE PRODUCT IS MORE LIQUID, FACILITATING THE APPLICATION PROCESS.**

- Remove the application hose and the valve puller keychain from the package. Remove the cap and screw the application hose
- Remove the valve core using the valve puller key;
- Wait for the tire to deflate completely;
- Firmly fit the application hose to the air valve;
- Slowly inject the entire contents of the vial;
- Apply an air jet inside the valve to eliminate sealant residues;
- Reinstall the valve core;
- Calibrate the tire following the motorcycle manufacturer's recommendation;
- Replace the cap to protect the valve from dirt and moisture.
- 
- 





## ATTENTION

- Seals holes only in the tread;
- Works with a minimum pressure of 20 PSI;
- Does not seal tears or cuts;
- Does not seal holes in the sidewall and shoulder of the tire;
- Do not apply to tires and tubes with a cold patch.

## ADDITIONAL INFORMATION

- Packing type: pouch
- Content: 250ml
- Gross Weight: 280g
- Dimensions: 210 x 105 x 45 mm
- Product validity: 6 years



# PRODUCT APPLICATION VIDEO



Clique no ícone para  
assistir ao vídeo.

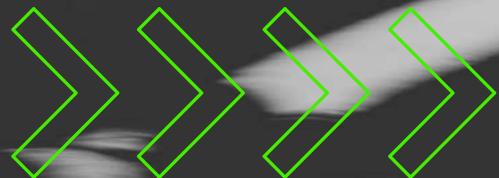


**x**tire™



**ACINA**®  
DE PNEU

**AUTO**





**ACINA**<sup>®</sup>  
DE PNEU  
**AUTO**

**Instantly seals punctures in tubeless  
and tubeless tires.**

# Tire Vaccine

## AUTO

There's nothing better than driving your car for walks, trips or work without having to stop or call SOS to change a flat tire.

Auto Tire Vaccine is a preventive sealant that seals unwanted punctures instantly, preventing pressure loss.

Application is easy, quick and clean, without the need to disassemble the tire and wheel.



## SPECIFICATION

With the vehicle in motion, the puncture is instantly sealed.

If the tire loses pressure, just inflate it and keep driving.



- Apply one pack per tire
- Can be applied to tubeless and tubeless tires
- Sealing capacity (diameter of smooth piercing object):
  - Tubeless tires: up to 5mm
  - Tires WITH inner tube: up to 2.5mm
- Preventive product:
  - Apply before the tire goes flat
- Ecologically correct:
  - Biodegradable
  - Nontoxic
  - Non flammable
- Comes with exclusive valve puller keychain

# AVAILABLE VERSIONS



## PASSENGER CAR (275ml)



## SUV / PICK-UP (350ml)



# NEW PACKAGE



- More economical.
- Modern and striking look.
- Application even easier and faster.
- No applicator required.
- All you have to do is open the cap and screw on the new and exclusive application hose that makes it easy to fit the valve.
- It comes with an exclusive valve puller keychain.
- Even greener packaging with 90% less plastic.



## ATTENTION

- Seals holes only in the tread;
- Works with a minimum pressure of 20 PSI;
- Does not seal tears or cuts;
- Does not seal holes in the sidewall and shoulder of the tire;
- Do not apply to tires and tubes with a cold patch.

## ADDITIONAL INFORMATION

- Packing type: pouch
- Content: 275ml
- Gross Weight: 300g
- Dimensions: 210 x 105 x 45 mm
- Product validity: 6 years



# BENEFITS IN FUEL SAVINGS AND INCREASE TIRE LIFE WITH UP TO 6X MORE TIRE PRESSURE MAINTENANCE

## XTIRE prevents premature tire wear

A tire that works at standard pressure guarantees the useful life indicated by the manufacturer.



When running with **10% below** the indicated pressure

Reduced tire life

**7%**

When running with **20% below** the indicated pressure

Reduced tire life

**25%**

## XTIRE reduces fuel consumption

A tire running at standard pressure minimizes 'rolling resistance' and reduces the energy needed by the engine to keep it running.



When running with **10% below** the indicated pressure

Increased fuel consumption

**3 %**

When running with **20% below** the indicated pressure

Increased fuel consumption

**6%**

<http://www.tires.co.nz/news/helpful-tips-for-maximizing-tyre-life>

<http://www.schradersensors.com/en/driver-education/tire-pressure-and-fuel-economy>

## HOW TO APPLY THE PRODUCT



**IT IS MANDATORY TO BALANCING THE 4 WHEELS BEFORE APPLYING THE PRODUCT ON PASSENGER VEHICLES, PICK-UPS AND SUVs, UNDER PENALTY OF LOSS OF WARRANTY AND RISK OF VIBRATION.**

**SHAKE THE PACKAGING VIGOROUSLY FOR 20 SECONDS TO HOMOGENIZE THE PRODUCT, DISTRIBUTING ITS INGREDIENTS EVENLY, SO THE PRODUCT IS MORE LIQUID, FACILITATING THE APPLICATION PROCESS.**

- Remove the application hose and valve puller key ring from the package.
- Remove the cap and screw the application hose
- Remove the valve core using the valve puller key;
- Wait for the tire to deflate completely;
- Firmly fit the application hose to the air valve;  
Slowly inject the entire contents of the vial;
- Apply an air jet inside the valve to eliminate sealant residues;
- Reinstall the valve core;  
Calibrate the tire following the vehicle manufacturer's
- recommendation;
- Replace the cap to protect the valve from dirt and moisture.



# Application Guide

## Auto Tire Vaccine

- **WHEEL BALANCING IS MANDATORY BEFORE APPLYING THE PRODUCT.**
- Make sure that the product matches your vehicle type: **PASSENGER CAR** or **PICK-UP/SUV**.
- If your vehicle has a calibration sensor (**TPMS**), follow the specific application guide for this model.
- To carry out a new balancing, the product must be removed from the tires.
- Removal is done by dismounting the tire from the wheel and cleaning using only water.
- **Vigorously shake the package for 20 seconds before applying.**

### TIRE CONDITIONS FOR PRODUCT APPLICATION

- Tubeless and tubeless tires;
  - New and used tubes;
  - New, used and refurbished ("remold") tires with INMETRO seal that are within the expiration date and in regular use **1**;
  - Do not apply to scratched tires **2**;
  - Tires/tubes without cuts and without piercing objects; Tires/tubes without drying out;
  - Tires with a minimum tread of 1.6mm (TWI) **3**;
  - Tires/tubes without glue-based cold patches;
  - Seals holes only in the tread;
  - Works with a minimum pressure of 20 PSI;
  - Does not seal tears or cuts;
  - Does not seal sidewall and shoulder punctures.
  -
- 1 - Tire Validity:** 5 years from the manufacturing date which is found on the sidewall of the tire after the DOT abbreviation. There are four numbers, the first 2 being the week number (from 01 to 52) and the last 2 the year. Example: DOT H2PC YCVP 3311, indicates that this tire was manufactured in the 33rd week of the year 2011.
- 2 - Scratched Tires:** Brazilian legislation considers the use of this type of tire to be a serious infraction and provides for the retention of the vehicle.
- 3 - TWI (Tread Wear Indicator):** according to Resolution No. 558/80, art. 4, of Contran – National Traffic Council "the circulation of a motor vehicle equipped with a tire whose tread wear has reached the indicators and the remaining depth of the tread is less than 1.6 mm is prohibited".
- 4 - Perforations** caused by other types of objects (eg screw, rebar, drill) may have their seal compromised, due to damage to the integrity of the tire.

## Application in vehicles WITHOUT calibration sensor (TPMS)



REMOVE THE  
WHEEL OF  
VEHICLE



PERFORM WHEEL  
BALANCING



REMOVE THE VALVE  
CORE AND WAIT FOR  
THE TIRE TO DEplete



FIT THE HOSE ON THE  
VALVE AND APPLY THE  
VACCINE



APPLY AN AIR JET TO  
THE VALVE TO  
REMOVE RESIDUES  
FROM THE PRODUCT



REINSTALL THE VALVE  
CORE AND CALIBRATE  
THE TIRE WITH NORMAL  
PRESSURE

## Application in vehicles WITH calibration sensor (TPMS)

The calibration sensor is located inside the wheel, connected to the air valve. This part measures the internal pressure of the tire and sends it to the vehicle's dashboard. There is a wide variety of sensors and many of them make it difficult or do not allow the passage of the product. To prevent the application from being interrupted by one of these models, the application must be done through the tire bead. See below the procedure for applying the Auto Xtire Tire Vaccine through the tire bead. This procedure is simple and must be done at an automotive center or tire shop.



REMOVE THE  
WHEEL OF  
VEHICLE



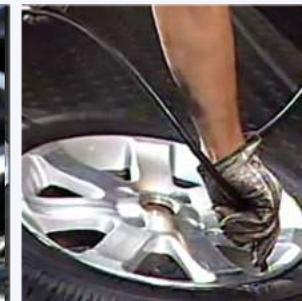
PERFORM WHEEL  
BALANCING



REMOVE THE VALVE  
CORE AND WAIT FOR  
THE TIRE TO DEplete



FIT THE HOSE ON THE  
VALVE AND APPLY THE  
VACCINE



APPLY AN AIR JET TO  
THE VALVE TO  
REMOVE RESIDUES  
FROM THE PRODUCT



REINSTALL THE VALVE  
CORE AND CALIBRATE  
THE TIRE WITH NORMAL  
PRESSURE

# PRODUCT APPLICATION VIDEO



Clique no ícone para assistir ao vídeo.



# VACCINE TEST

AUTO ESPORTE TV GLOBO PROGRAM

To watch, click here.



**X**tire™



**VACINA**®  
DE PNEU

**FROTA MAX**

# Tire Vaccine

## FROTA MAX

**It has great effectiveness in sealing holes caused in the tread, and can be applied to new and retreaded tires, with and without an inner tube, allowing retreading without loss of warranty, as the product is easily removed and discarded after use.**

**A flat tire in these segments is synonymous with loss, as it reduces the availability of the fleet, causes delays in deliveries and in the execution of scheduled services.**

**The process of applying the product is simple, easy and clean. It can be applied to tires mounted through the air pressure valve or through the bead during mounting.**

**Due to the wide variety of vehicles and tire sizes, different types of terrain and conditions of use, dosages are calculated considering all these variables to meet customer needs with maximum efficiency.**



# TIRE VACCINE FROTA MAX

**FROTA MAX'S** exclusive and advanced formula seals unwanted punctures in tires automatically, instantly and permanently.



**FROTA MAX** Tire Vaccine creates a liquid protective layer in the tread area due to the centrifugal force generated by wheel rotation. Sealant is evenly spread avoiding vibrations.

**FROTA MAX turns a regular tire into a self-sealing tire.**

When the tire is punctured, **FROTA MAX** instantly seals it from the inside out, preventing loss of air pressure, corrosion and contamination of the tire structure.

Sealing limits vary depending on the Tire Size or Protection Level applied.

**FROTA MAX** can be applied in three different Dosages/Levels of protection:

Standard Protection - Severe Protection - Total Protection

\* As a reference, a Truck Tire (road use), with Standard Protection: Hole sealing limit of up to 8mm in the tread area.

**FROTA MAX'S** exclusive formula is WATER-BASED (H<sub>2</sub>O) + ANTIOXIDANT, Fibers and Adhesives. It is biodegradable, non-toxic and non-flammable.

In addition to sealing holes, **FROTA MAX** generates hydrodynamic balancing of the wheel/tyre set. It also eliminates temperature peaks located in the tire and, **MOST IMPORTANTLY**, reduces the natural loss of air pressure by 6x to 10x, which directly impacts **FUEL CONSUMPTION AND TIRES LIFETIME**.

# FROTA MAX IN ACTION

Tires protected 24 hours a day, 7 days a week

01



Tire protected with FROTA MAX

02



Perforation

03



FROTA MAX in contact with the perforation

04



Protection Layer

05



Sealing from the inside out

06



SEALING carried out

# FROTA MAX XTIRE

## Packaging and Application System



**Bombona 20 liters**  
Manual applicator  
pump



**Drum 200 liters** Pneumatic  
system with digital dosing  
control

Lançamento: ABR/ 2023

# APPLICATION WITHOUT COMPLICATION

Tires protected 24 hours a day, 7 days a week



## MOUNTED TIRES

The application is made through the air pressure valve without the need to remove the tire from the wheel.



## DISMANTLING TIRES

The application is made through the tire bead during the assembly process.



Xtire Applicator  
Pump 250ml

# FROTA MAX • LEVELS OF PROTECTION

Standard Protection - Severe Protection - Total Protection

## STANDARD PROTECTION: RECOMMENDED FOR URBAN AND ROAD USE

- Puncture Protection Tread Only (Not recommended for AGRO, OTR and Industrial);
- Sealing Guarantee for the **Normal** rate of punctures per tire (Urban and Highway Use);
- Maintenance of Air Pressure against natural losses (6x greater);
- Treadband Temperature Equalization (avoiding localized peaks);
- Use in any Speed Regime (No Speed Restriction).



To watch the video,  
click on the image

## SEVERE PROTECTION: RECOMMENDED FOR TRUCK - AGRO - OTR

- Protection against punctures in the tread + beginning of the shoulder of the tire;
- Sealing Guarantee for a **high** rate of punctures per tire (Mixed Use: Urban/Road and Off-Road);
- Greater maintenance of Air Pressure against natural losses (8x greater);
- Greater Tread Temperature Equalization (avoiding localized peaks);
- Use restricted to Vehicles/Equipment at Low and Medium Speed (up to 80 km/h).



To watch the video,  
click on the image

## TOTAL PROTECTION: RESTRICTED USE - OFF ROAD

Protection against holes in the tread + shoulder + sidewall + bead leakage;  
Seal Guarantee for **Extreme** Puncture Per Tire (Off-Highway Use);  
Greater maintenance of Air Pressure against natural losses (10x greater);  
Tire Cooling, eliminating peaks in All Critical Areas, including the contact between the Bead and Rim;  
Use restricted to Vehicles/Equipment at Low Speed (up to 40 km/h).



To watch the video,  
click on the image

# FROTA MAX • CHARACTERISTICS

## SOLUTION WITHOUT RESTRICTIONS



Instantly seals Tread Holes(Standard and Severe Protection) and Tread Area + Tire Shoulder + Sidewall + Bead Leaks(Total Protection), from the inside out, preventing Vehicle/Equipment Stopping for Repair a flat tire.

The application is made through the air pressure valve, without the need to remove the tire from the wheel or even from the Vehicle/Equipment.

It can be applied to Tires With and Without Tubes, and also to New, Used and Refurbished Tires.

It prevents corrosion on the Tire Steel Belt and on the Wheel (all metallic parts), in addition to reducing the tire's internal temperature, which helps to increase the Tire's Lifespan and preserve its Structure.



Does not damage the tire structure and promotes better performance in retreading.



Can be used with Pressure Equalization System (CAT'S EYE).



Can be used in tires with Chip Sensor (example: RFID).

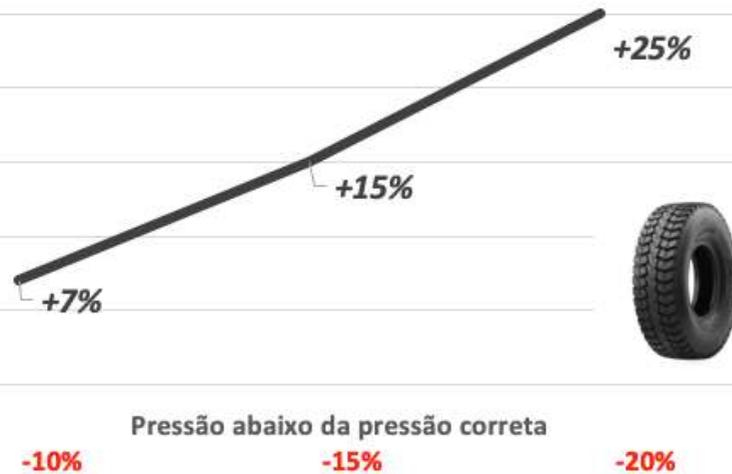


Can be used on Nitrogen Inflated Tires.

# Driving with tires below the correct calibration

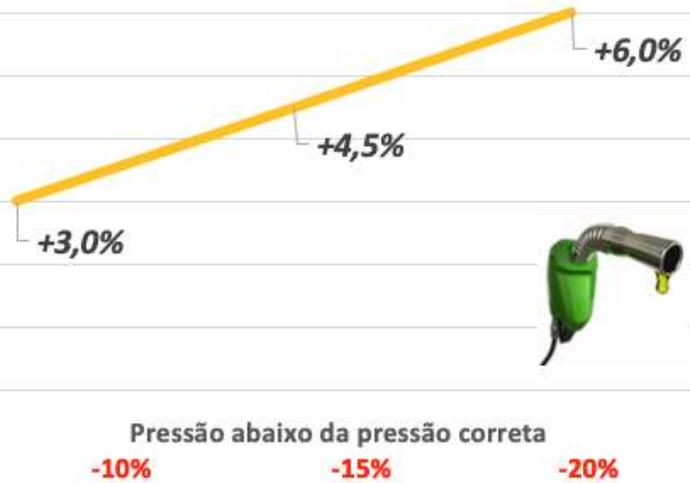
Increases fuel consumption and causes premature tire wear

## Aumento do Desgaste dos Pneus (%)



Source: <http://www.tires.co.nz/news/helpful-tips-for-maximizing-tyre-life>

## Aumento do Consumo de Combustível (%)



Source: <https://www.schradersensors.com/en/driver-education/tire-pressure-and-fuel-economy>

## THE MAIN REASONS ARE:

### 1. LOSS OF 1 TO 3 PSI PER MONTH:

Air osmosis through the tire casing can lead to significant air loss, and this can vary depending on the make, model and conditions of use of the tire. Operating temperature variations are also responsible for the osmosis effect.

### 2. LOSS OF 1 TO 3 PSI PER DAY:

Micro-perforations, cracks and defects in the inner liner (watertight) of the tire, mainly in the tread, caused by impacts against holes or objects on the road.

### 3. LOSS OF 2 TO 3 PSI PER DAY:

Slow leaking holes in the tread area are the main cause of air loss in tires. A nail lodged in the tire groove can cause a great loss of air.

**Note: FROTA MAX dramatically reduces or eliminates pressure loss in all of the above situations**

# REDUCTION IN FUEL CONSUMPTION AND INCREASE IN THE LIFE OF THE TIRES

Fuel and Tire are the two biggest costs in the vast majority of Fleet Operators

FROTA MAX automatically improves the performance of these two items simply by maintaining Air Pressure **6x to 10x** more

## FROTA MAX -Prevents premature tire wear

A Tire operating at the Correct Pressure guarantees the “**Useful Life**” indicated by the Tire Manufacturer.

Operating at **10%** below the Correct Pressure = **7%** reduction in Tire Life

Operating at **20%** below the Correct Pressure = **25%** reduction in Tire Life

## FROTA MAX - Reduces Fuel Consumption

A Tire operating at the Correct Pressure minimizes “**Rolling Resistance**”, reducing the energy needed to maintain movement at a consistent speed over a surface.

Operating **10%** below Correct Pressure = **3%** increase in Fuel Consumption

Operating **20%** below Correct Pressure = **6%** increase in Fuel Consumption



**Note:** tire manufacturers indicate that a truck tire loses an average of 10% of pressure in 20 to 25 days

## OTHER SAVINGS GENERATED BY USING XTIRE

In addition to drastically reducing the number of flat tires, increasing tire life and reducing fuel consumption, there are other factors that must be considered when using XTIRE in fleet vehicles. Expenses arising from flat and flat tires, hide damage far beyond the imagined.

**XTIRE offers more safety for the driver and the vehicle, and a lot of savings for the Company.**

- ✓ Expenses for repairing flat tires
- ✓ Cost of SOS service and tire repair logistics
- ✓ Decrease in productivity due to equipment being stopped due to a flat tire (delay in deliveries/services)
- ✓ Premature loss of carcass due to running on a flat tire / losing pressure
- ✓ Fleet unavailability per vehicle stopped for maintenance (Downtime)
- ✓ Possible loss of the casing in the overhaul/retreading due to wear caused by low calibration
- ✓ Possible loss of the paired tire in double rotation caused by overload after having the first flat tire
- ✓ Cost of vehicle/equipment maintenance for damage caused by a tire blowout (mudguards, taillights, etc.)
- ✓ Vehicle maintenance cost caused by running on under-inflated tires
- ✓ Vehicle drivability compromised by unbalanced tires, which could result in an accident
- ✓ Risk of theft when stopping to change a flat tire
- ✓ Risk of accident when stopping to change a flat tire
- ✓ Lowering the internal temperature of the tire increases its lifespan, reduces the number of bursts and better preserves the carcass
- ✗ With XTIRE, the focus becomes preventive maintenance, reducing unexpected expenses



# FROTA MAX MAINTAINS THE PRESSURE OF THE TIRES

Unexpected savings and security for your fleet

- 6x to 10x more Pressure Maintenance when compared to a Tire without **FROTA MAX**
- Increased tire life by up to 25%
- Reduction in fuel consumption up to 7%
- Reduced risks of premature loss of casing or explosion



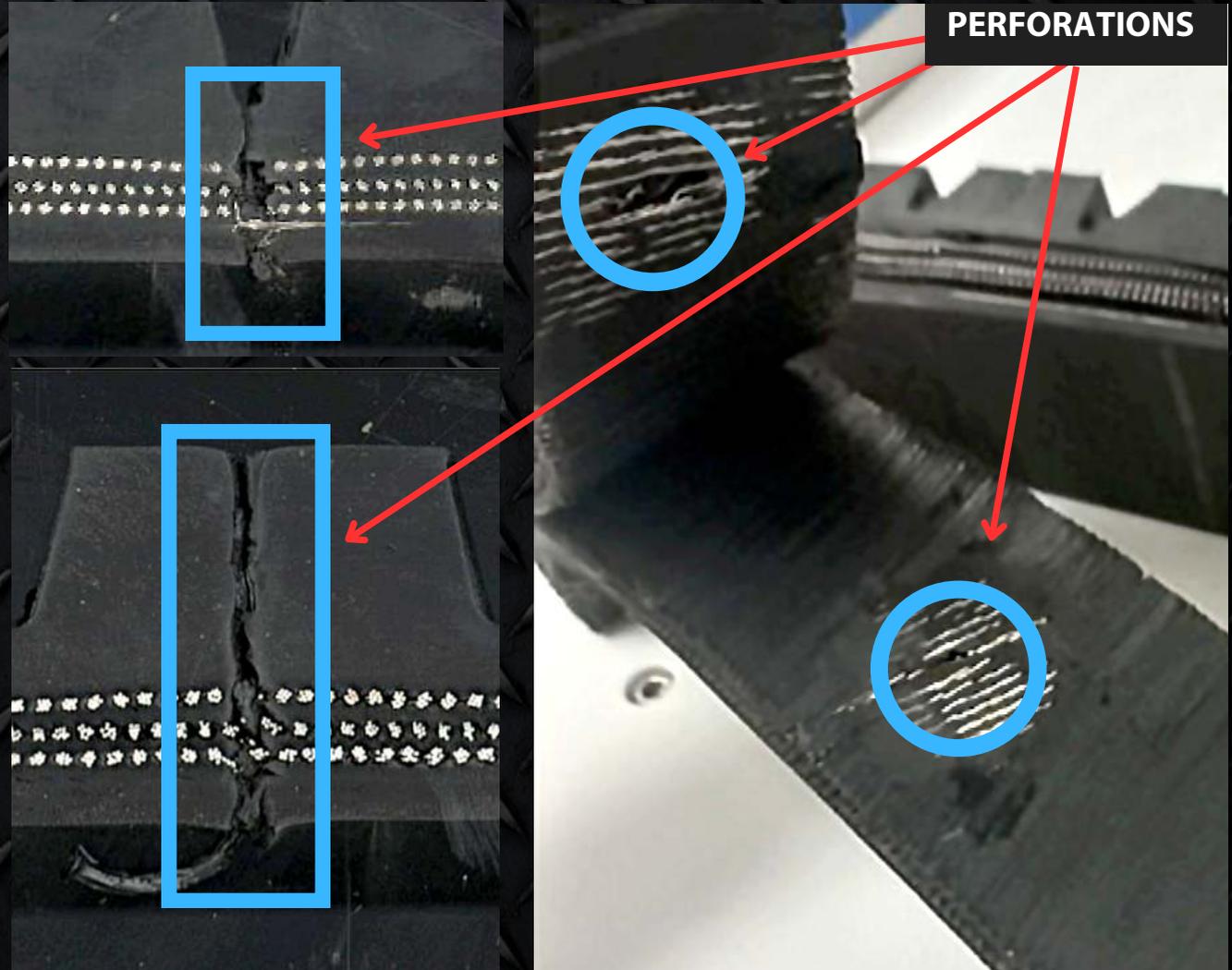
*REAL CASE: A waste collection and treatment company showed a 5% reduction in fuel consumption and a 24% increase in tire life using FROTA MAX.*

# FROTA MAX SEALANT INTERACTION TEST

## TRUCK TIRE

A detailed analysis of the perforated areas of a truck tire that ran with Frota Max sealant, showed that there was no negative effect of the product on any tire component such as rubber, steel belts, nylon belts, interior coating ("liner"), carcass and bead.

Even with punctures, the product, in addition to sealing, protected the tire from any type of infiltration or contamination, preserving its integrity.



**FROTA MAX - XTIRE, YOUR TIRE IS 100% PROTECTED!**

# CUSTOMER WORD

GROUP PROTECTS customer since April/2017



## ATESTADO DE CAPACIDADE TÉCNICA

Afirmamos que utilizamos o produto, Selante de Pneus Preventivo de Furos – XTIRE “Frota Max”, desde 06/04/2017 em nossa frota.

Atestamos que o produto de fato cumpre sua função de selador automático de perfurações na banda de rodagem dos pneus conforme informado pelo fabricante, sem nunca ter causado nenhum tipo de dano ou quaisquer outros efeitos negativos aos pneus ou rodas dos veículos.

O produto também trouxe benefício econômico para nossa frota através do aumento da disponibilidade dos veículos e redução no custo de combustível e manutenção e/ou perda de pneus.

Sem mais,

  
Roberto Dias  
Gerente de Frota  
Frota: 40.538

  
Nelson Vieira de Oliveira  
Diretor de Engenharia e Manutenção  
Frota: 37

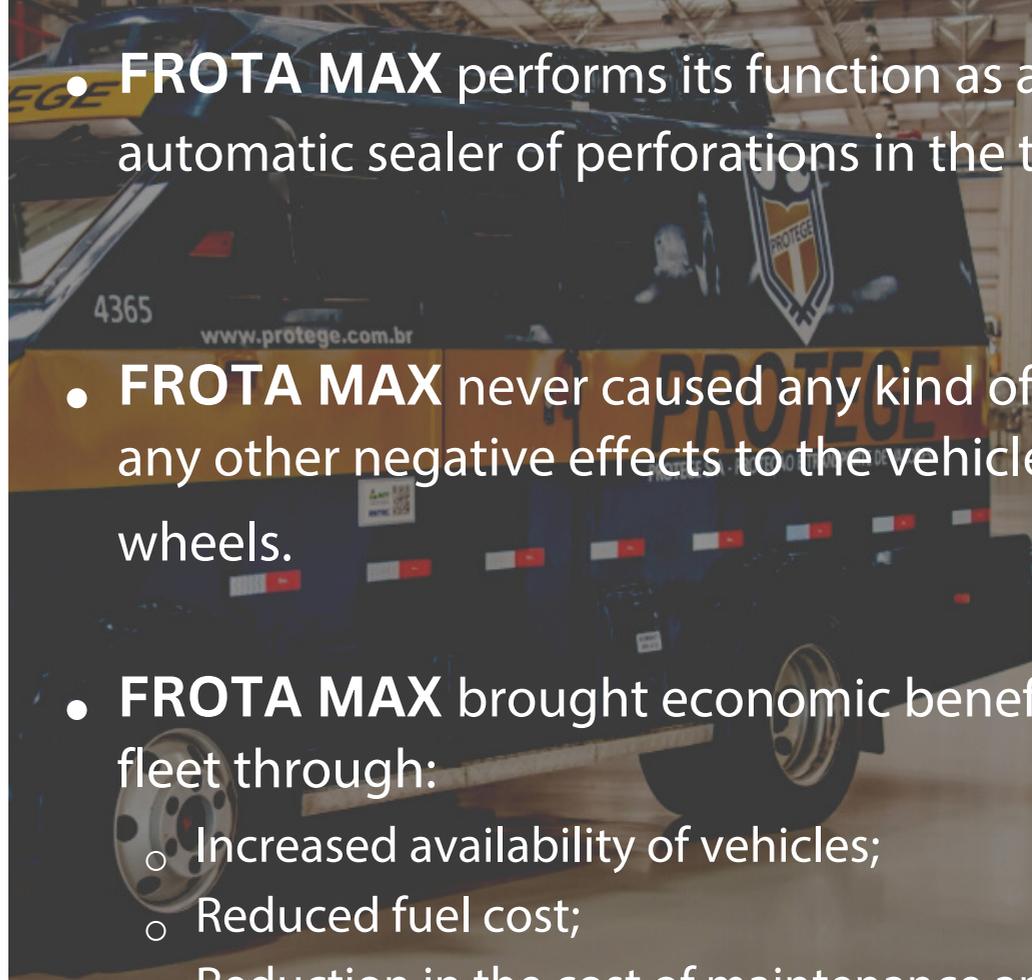
Grupo Protege  
Rua Visconde de Ouro Preto 72 - Consolação  
CEP 01303-060 - São Paulo - SP - Brasil  
Tel 55 11 3156 0800 - Fax 55 11 3156 0800  
[www.protege.com.br](http://www.protege.com.br)

● **FROTA MAX** performs its function as an automatic sealer of perforations in the tread.

● **FROTA MAX** never caused any kind of damage or any other negative effects to the vehicle's tires or wheels.

● **FROTA MAX** brought economic benefit to the fleet through:

- Increased availability of vehicles;
- Reduced fuel cost;
- Reduction in the cost of maintenance and/or loss of tires.



# INFINITE BENEFITS FOR YOUR BUSINESS

Reduction of Costs and Risks = Greater Competitiveness

## FLAT TIRES = HUGE LOSSES



Cost reduction with mechanical assistance.



Reduced puncture repair costs



Reduction in Premature Carcass Loss



Reduction in downtime costs maintenance vehicles/equipment



Reduction of the Risk of Accidents (Increased Road Safety)



Reduced risk of theft due to unscheduled stops



Increased Punctuality and Customer Satisfaction



Increased fleet availability

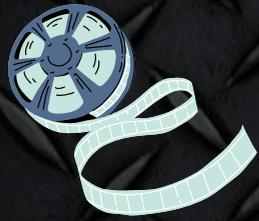


Air Pressure Maintenance 6x to 10x more, thus allowing the vehicle to operate at optimal tire air pressure



ROI below 30 days (according to the operation)





# MAIN VIDEOS

To watch, click on the images.



**Standard Protection**



**Severe Protection**



**Total Protection**



**.40 Pistol Test**



**FROTA MAX**



**AutoEsporte Program**

# HOW TO APPLY



**1**  
CALÇAR O VEÍCULO COM MACACO  
OU CAVALETE.



**2**  
VERIFICAR A MEDIDA DO PNEU E  
CONSULTAR A DOSAGEM.



**3**  
AGITAR A BOMBONA POR  
30 SEGUNDOS PARA HOMOGENEIZAR  
O PRODUTO.



**4**  
REMOVER O NÚCLEO DE VÁLVULA  
USANDO UM SACA-VÁLVULA E  
AGUARDAR O ESVAZIAMENTO  
COMPLETO DO PNEU.



**5**  
CONECTAR O BICO DA MANGUEIRA NA  
VÁLVULA DO PNEU.



**6**  
BOMBPEAR LENTAMENTE O PRODUTO  
SEGUINDO A DOSAGEM DEFINIDA PARA  
ESSA MEDIDA DE PNEU.



**7**  
APLICAR UM JATO DE AR NA VÁLVULA  
PARA ELIMINAR RESÍDUOS DO  
PRODUTO.



**8**  
REINSTALAR O NÚCLEO DE VÁLVULA E  
CALIBRAR O PNEU COM A PRESSÃO  
RECOMENDADA PELO FABRICANTE.



**9**  
EIXO COM RODAGEM DUPLA  
REMOVER A RODA EXTERNA.



**10**  
EIXO COM RODAGEM DUPLA  
REMOVER O PROLONGADOR DE  
VÁLVULA DA RODA INTERNA.



**11**  
EIXO COM RODAGEM DUPLA  
APLICAR O PRODUTO SEGUINDO  
O PROCEDIMENTO PADRÃO.



**12**  
A APLICAÇÃO DO PRODUTO TAMBÉM  
PODE SER FEITA PELO TALÃO.

# Commercialization



To purchase this product, please contact us.

WhatsApp: [+351 969 699 984](https://wa.me/351969699984) from Monday to Friday from 8 am to 5 pm.

E-mail: [info@xtire.pt](mailto:info@xtire.pt)

Due to the wide variety of vehicles and tire sizes, different types of terrain and conditions of use, dosages are calculated considering all these variables to meet customer needs with maximum efficiency.

To find out the amount of product that should be applied to the vehicles in your fleet, contact Xtire. A specialized team will provide all the information requested and clarify all doubts, as soon as possible.

## Exemple: 275/80 R22.5

- TIRE WIDTH (example 275)
- TIRE PROFILE (example 80)
- RIM SIZE (example 22.5)



**CONTACT US. WE ARE WAITING.**



**X**tire™

**VACINA**®  
DE PNEU

**AGROFORTE**



# YACINA<sup>®</sup> DE PNEU AGROFORTE

The Agroforte Tire Vaccine was developed exclusively to seal punctures in agricultural tractor tires that use water ballast.

SELANTE PARA PNEUS PREVENTIVO DE FURROS

**YACINA<sup>®</sup>  
DE PNEU  
AGROFORTE**

VEJA FURROS NOS PNEUS  
INSTANTANEAMENTE

PNEUS INFLADOS  
24 HORAS POR DIA

SECUNDARIAMENTE  
PROTECO  
NÃO SE ENFURCA

ANTES DA APLICACAO, LIMPEZ A BORDA E ENVOLVA EM BARRA PROTETORA E PROTECTOR

**APLICACAO**

Em pneus com ou sem  
barras de protecao,  
deve-se aplicar o selante  
na borda do pneu, antes  
de inflar, com um  
pincel de cerdas duras,  
de modo a penetrar  
na ranhura da borda  
e no interior do pneu.

**COMPOSICAO**

Este selante contem  
uma resina de PVC,  
que se adere ao  
interior do pneu,  
formando uma  
barreira impermeavel  
e resistente a  
abrasao.

**INDICACAO DE USO**

Aplicar em todos  
os pneus de tractor  
de rodas fixas,  
de rodas movidas  
e de rodas  
direcionais, com  
ou sem barras de  
protecao, e em  
pneus de camio  
de rodas fixas,  
de rodas movidas  
e de rodas  
direcionais, com  
ou sem barras de  
protecao.

**PRECAUCOES**

Evitar o contacto com  
os olhos e com a pele.  
Em caso de contacto  
com os olhos, lavar  
abundantemente com  
agua corrente.  
Em caso de contacto  
com a pele, lavar  
abundantemente com  
agua corrente.  
Manter o produto  
fora do alcance das  
criancas.  
Não utilizar o produto  
para outros fins.  
Não utilizar o produto  
para a reparacao de  
pneus de camio de  
rodas movidas e de  
rodas direcionais.  
Não utilizar o produto  
para a reparacao de  
pneus de camio de  
rodas fixas.

**YACINA<sup>®</sup>  
DE PNEU  
AGROFORTE**

YACINA<sup>®</sup> DE PNEU E COMERCIALIZADO POR:  
YACINA, S.A. DE INVESTIMENTO, SIDA 1000001 - 10010  
Rua Yacina, S/N, 4700-000 Beja - Portugal  
Tel: 351 251 2420000 - Fax: 351 251 2420001  
Email: yacina@yacina.com.pt - yacina.com.pt

YACINA<sup>®</sup> DE PNEU AGROFORTE - 1 Litro de Agente - 100100001

**Xtire**

# Agroforte Tire Vaccine for Tires with Water Ballast

Its concentrated formula allows dilution in water.

Its formula is biodegradable, non-toxic and non-flammable.





## SPECIFICATIONS

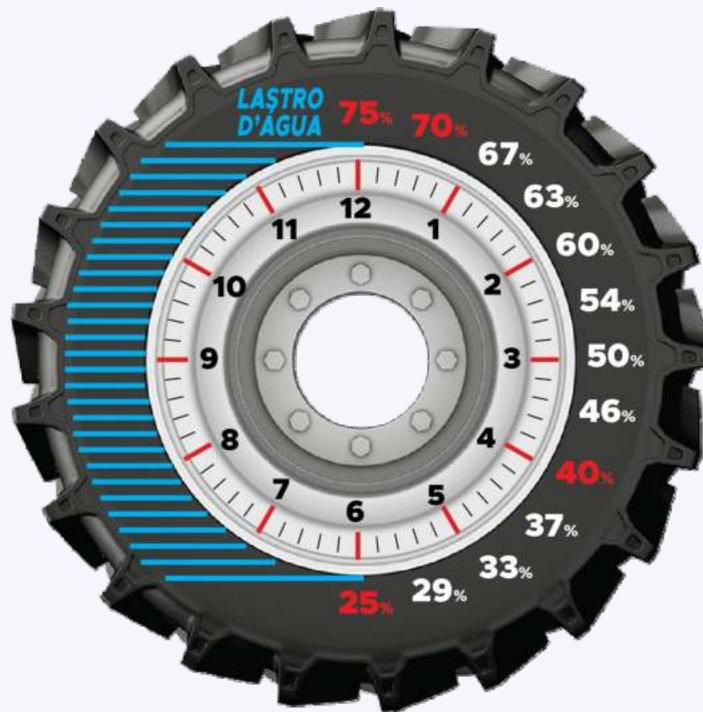
- The fibers present in the Agroforte formula remain in suspension and in motion while the wheel turns;
- It can be applied through the air pressure valve;
- A small water leak may occur until the fibers reach the hole channel and seal it completely;
- The product can be applied to tires with and without a tube.
- Eco-Friendly: The product is biodegradable, non-toxic and non-flammable.



**Agroforte Tire Vaccine, seals punctures caused by objects up to 8 mm in diameter in tubeless tires and up to 4 mm in tube tires, depending on their type and size.**

**Agroforte instantly seals punctures in the tread of the tire or tube. It can be applied to new tires or tires that already have water ballast.**





## How to apply

# HOW TO APPLY AGROFORTE ACCORDING TO THE AMOUNT OF WATER BALLAST

### PNEU SEM LASTRO D'ÁGUA APLICADO

1. Consultar a Xtire para saber a quantidade de AGROFORTE para o pneu do seu trator de acordo com o lastro d'água a ser aplicado.
2. Posicionar o pneu com a válvula na posição correspondente ao lastro desejado.
3. Aplicar a quantidade de AGROFORTE recomendada pela Xtire.
4. Completar com água até que comece a sair pela válvula.

### PNEU COM LASTRO D'ÁGUA APLICADO

1. Consultar a Xtire para saber a quantidade de AGROFORTE para o pneu do seu trator de acordo com o lastro d'água a ser aplicado.
2. Posicionar o pneu com a válvula na posição 6H e aguardar até que a água pare de sair.
3. Posicionar o pneu com a válvula na posição correspondente ao lastro desejado.
4. Aplicar a quantidade de AGROFORTE recomendada pela Xtire.
5. Completar com água até que comece a sair pela válvula.



## Attention

The effectiveness of the seal depends on the conditions under which the tire is used: within the period of validity (normally 5 years); the level of dryness of the rubber (caused by tire life or wear) and use within the tire or tube manufacturer's specifications. Tires outside the mentioned conditions affect the memory effect of the rubber, impairing the seal.



# Commercialization



To purchase this product, please contact us.

WhatsApp: +351 969 699 984 Monday to Friday, from 8 am to 5 pm

E-mail: [info@xtire.pt](mailto:info@xtire.pt)

Due to the wide variety of vehicles and tire sizes, different types of terrain and conditions of use, dosages are calculated considering all these variables to meet customer needs with maximum efficiency.

To find out the amount of product that should be applied to the vehicles in your fleet, contact Xtire. A specialized team will provide all the information requested and clarify all doubts, as soon as possible.

**CONTACT US. WE ARE WAITING.**



# VACINA DE PNEU DEFENSE





# XACINA<sup>®</sup> DE PNEU DEFENSE

**Instantly seals punctures in  
tubeless and tubeless tires.**

# XTIRE DEFENSE

XTIRE's exclusive and advanced formula automatically, instantly and permanently seals unwanted tire punctures.



**XTIRE DEFENSE** Tire Vaccine creates a liquid protective layer in the tread area due to the centrifugal force generated by wheel rotation. Sealant is evenly spread avoiding vibrations.

**XTIRE turns a regular tire into a self-sealing tire.**

When the tire is punctured, **XTIRE DEFENSE** instantly seals it from the inside out, preventing loss of air pressure, corrosion and contamination of the tire structure.

Sealing limits vary depending on the Tire Size or Protection Level applied.

**XTIRE DEFENSE** can be applied in three different Dosages/Levels of protection:

Standard Protection - Severe Protection - Total Protection

\* As a reference, a Truck Tire (road use), with Standard Protection: Hole sealing limit of up to 8mm in the tread area.

**XTIRE DEFENSE'S** exclusive formula is WATER-BASED (H2O) + ANTIOXIDANT, Fibers and Adhesives. It is biodegradable, non-toxic and non-flammable.

In addition to sealing holes, **XTIRE DEFENSE** generates hydrodynamic balancing of the wheel/tyre set. It also eliminates **temperature peaks** located in the tire and, **MOST IMPORTANTLY**, reduces the natural loss of air pressure by 6x to 10x, which directly impacts FUEL CONSUMPTION AND TIRES LIFETIME..



## FULL LINE

The **XTIRE DEFENSE** Line has 4 different formulas, developed specifically for each type of vehicle:

- **DEFENSE Heavy**
- **DEFENSE Moto**
- **DEFENSE Bike**
- **DEFENSE Auto**

# XTIRE DEFENSE

For all types of Vehicles

Automobiles, Pick-ups, SUVs, Motorcycles, Bicycles,  
Vans, Trucks, Tactical and Armored Vehicles



# APPLICATION WITHOUT COMPLICATION

## HEAVY VEHICLES



### MOUNTED TIRES

The application is made through the air pressure valve without the need to remove the tire from the wheel.



### DISMANTLING TIRES

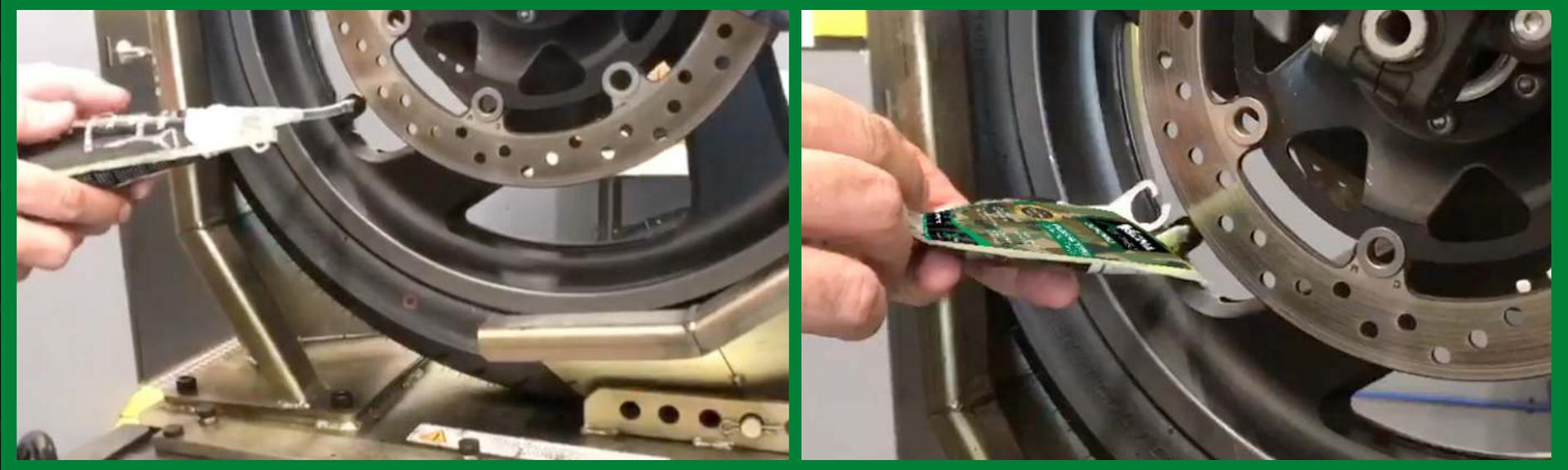
The application is made through the tire bead during the assembly process.



Xtire Applicator  
Pump 250ml

# APPLICATION WITHOUT COMPLICATION

LIGHT VEHICLES: MOTORCYCLE - BIKE - AUTO



## EASY, QUICK AND CLEAN APPLICATION

The application is made by the air pressure valve without the need to remove the tire from the wheel. The product comes pre-dosed and ready to apply.



# XTIRE DEFENSE • LEVELS OF PROTECTION

## Standard Protection - Severe Protection - Total Protection

### STANDARD PROTECTION: RECOMMENDED FOR URBAN AND ROAD USE

- Puncture Protection Tread Only (Not recommended for AGRO, OTR and Industrial);
- Sealing Guarantee for the **Normal** rate of punctures per tire (Urban and Highway Use);
- Maintenance of Air Pressure against natural losses (6x greater);
- Treadband Temperature Equalization (avoiding localized peaks);
- Use in any Speed Regime (No Speed Restriction).



To watch the video,  
click on the image

### SEVERE PROTECTION: RECOMMENDED FOR HEAVY VEHICLES

- Protection against punctures in the tread + beginning of the shoulder of the tire;
- Sealing Guarantee for a **high** rate of punctures per tire (Mixed Use: Urban/Road and Off-Road);
- Greater maintenance of Air Pressure against natural losses (6x to 8x greater);
- Greater Tread Temperature Equalization (avoiding localized peaks);
- Use restricted to Vehicles/Equipment at Low and Medium Speed (up to 70 km/h).



To watch the video,  
click on the image

### TOTAL PROTECTION: RESTRICTED USE - OFF ROAD

- Protection against holes in the tread + shoulder + sidewall + bead leakage;
- Seal Guarantee for **Extreme** Puncture Per Tire (Off-Highway Use);
- Greater maintenance of Air Pressure against natural losses (8x to 10x greater);
- Tire Cooling, eliminating peaks in All Critical Areas, including the contact between the Bead and Rim;
- Use restricted to Vehicles/Equipment at Low Speed (up to 35 km/h).



To watch the video,  
click on the image

# XTIRE DEFENSE • CHARACTERISTICS

## SOLUTION WITHOUT RESTRICTIONS



Instantly seals Tread Holes (**Standard and Severe Protection**) and Tread Area + Tire Shoulder + Sidewall + Bead Leaks (**Extreme Protection**), from the inside out, preventing Vehicle/Equipment Stopping for Repair a flat tire.



The application is made through the air pressure valve, without the need to remove the tire from the wheel or even from the Vehicle/Equipment.



It can be applied to Tires With and Without Tubes, and also to New, Used and Refurbished Tires.



It prevents corrosion on the Tire Steel Belt and on the Wheel (all metallic parts), in addition to reducing the tire's internal temperature, which helps to increase the Tire's Lifespan and preserve its Structure.



Does not damage the tire structure and promotes better performance in retreading.



Can be used with Pressure Equalization System (CAT'S EYE).



Can be used in tires with Chip Sensor (example: RFID).



Can be used on Nitrogen Inflated Tires.

# XTIRE DEFENSE MAINTAINS THE PRESSURE OF THE TIRES

## Economy and Safety for Vehicles

- 6x to 10x more Pressure Maintenance when compared to a Tire without **XTIRE DEFENSE**
- Increased tire life by up to 25%
- Reduction in fuel consumption up to 7%
- Reduced risks of premature loss of casing or explosion

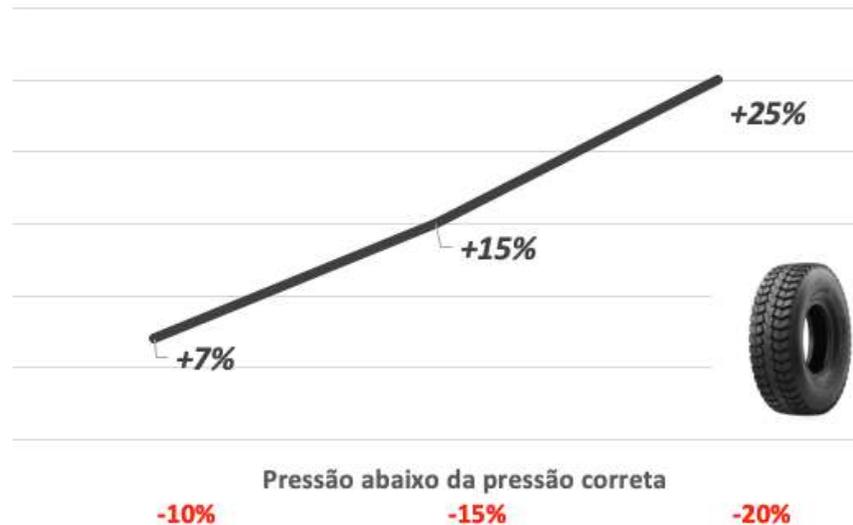


*REAL CASE: A waste collection and treatment company showed a 5% reduction in fuel consumption and a 24% increase in tire life using **XTIRE**.*

# Rodar com pneus abaixo da calibragem correta

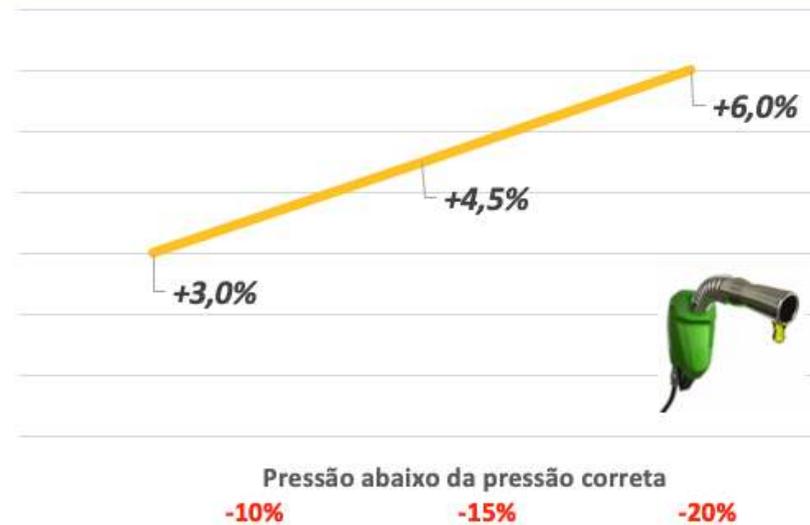
## Aumenta o consumo de combustível e causa desgaste prematuro dos pneus

Aumento do Desgaste dos Pneus (%)



Source: <http://www.tires.co.nz/news/helpful-tips-for-maximizing-tyre-life>

Aumento do Consumo de Combustível (%)



Source: <https://www.schradersensors.com/en/driver-education/tire-pressure-and-fuel-economy>

### THE MAIN REASONS ARE:

#### 1. LOSS OF 1 TO 3 PSI PER MONTH:

Air osmosis through the tire casing can lead to significant air loss, and this can vary depending on the make, model and conditions of use of the tire. Operating temperature variations are also responsible for the osmosis effect.

#### 2. LOSS OF 1 TO 3 PSI PER DAY:

Micro-perforations, cracks and defects in the inner liner (watertight) of the tire, mainly in the tread, caused by impacts against holes or objects on the road.

#### 3. LOSS OF 2 TO 3 PSI PER DAY:

Slow leaking holes in the tread area are the main cause of air loss in tires. A nail lodged in the tire groove can cause a great loss of air.

**Note: XTIRE DEFENSE Dramatically reduces or eliminates pressure loss in all of the above situations**

# REDUÇÃO NO CONSUMO DE COMBUSTÍVEL E AUMENTO DA VIDA ÚTIL DOS PNEUS

Combustível e Pneu são os dois maiores custos na grande maioria dos Operadores de Frota

**XTIRE DEFENSE** melhora automaticamente o desempenho desses dois itens simplesmente mantendo a Pressão de Ar **6x a 10x** mais

## XTIRE DEFENSE - Prevents premature tire wear

A Tire operating at the Correct Pressure guarantees the “**Useful Life**” indicated by the Tire Manufacturer.

**Operating at 10% below the Correct Pressure = 7% Reduction in Tire Life**

**Operating at 20% below the Correct Pressure = 25% Reduction in Tire Life**

## XTIRE DEFENSE - Reduces Fuel Consumption

A Tire operating at the Correct Pressure minimizes “**Rolling Resistance**”, reducing the energy needed to maintain movement at a consistent speed over a surface.

**Operating at 10% below the Correct Pressure = 3% Increase in Fuel Consumption**

**Operating at 20% below the Correct Pressure = 6% Increase in Fuel Consumption**



**Note:** tire manufacturers indicate that a truck tire loses an average of 10% of pressure in 20 to 25 days

# SHOOTING WITH A FIREARMS

Pistol .40 ammo 180 grams • Distance 5 meters

The product was not developed to protect tires against firearm shots. The objective of the test was to evaluate the reaction of the product, considering that the result can be affected by a series of variables such as: type and caliber of the firearm, type of ammunition, shooting distance, angle of penetration of the projectile, size and type of tire, and its state of use, affected area, type of wheel and vehicle speed.



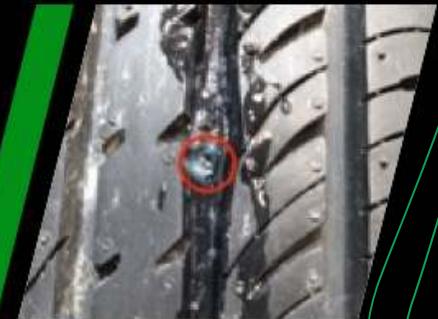
**PNEU AUTOMÓVEL  
165/70R13**



**O PNEU É  
ATINGIDO  
ENTRADA E SAÍDA**



**ORIFÍCIO DE  
ENTRADA  
VEDADO**



**ORIFÍCIO DE  
SAÍDA  
VEDADO**



**PNEU CAMINHÃO  
275/80R22.5**



**O PNEU É  
ATINGIDO  
SOMENTE ENTRADA**



**VEDAÇÃO DA  
PERFURAÇÃO**



**ORIFÍCIO DE  
ENTRADA  
VEDADO**

**IMPORTANT:** the test was carried out by a trained and qualified professional in a controlled environment and following the safety rules for handling firearms and the use of PPE.

# SAFER OPERATIONS

Risk Reduction and Increased Security

**FLAT TIRES = HIGH RISK**



CHASE



PATROLLING



PATROLLING



INVESTIGATION



SPECIAL  
OPERATIONS



PRISONER  
TRANSPORT



ESCORT



OSTENSIVE  
POLICING



COMBAT



TRAIN

# TECHNICAL CAPACITY CHARTS

## Security Companies and Military Police

### PROTEGE



#### ATESTADO DE CAPACIDADE TÉCNICA

Afirmamos que utilizamos o produto Selante de Pneus Preventivo de Furios - XTIRE "Frota Max" desde 05/04/2017 em nossa frota.

Atestamos que o produto de fato cumpre sua função de selador automático de perfurações na banda de rodagem dos pneus conforme informado pelo fabricante, sem nunca ter causado nenhum tipo de dano ou quaisquer outros efeitos negativos aos pneus ou rodas dos veículos.

O produto também trouxe benefício econômico para nossa frota através do aumento da disponibilidade dos veículos e redução no custo de combustível e manutenção e/ou perda de pneus.

Sem mais,

*[Signatures]*

Grupo Protege  
Rua Marquês de São Carlos, 11 - Campinas  
13113-000 - SP - Brasil  
Fone: (19) 3338-0000 Fax: (19) 3338-0001  
www.protege.com.br

### PROSEGUR



#### ATESTADO DE CAPACIDADE TÉCNICA

Afirmamos que utilizamos o produto Selante de Pneus Preventivo Contra Furios - XTIRE na frota de manutenção MITSUBISHI L200 TRITON SPORT GLS 4x4, de placa G0V986 da CPQD, visando comprovar a eficiência do produto quanto à manutenção da pressão dos pneus, como foi empregado uma pressão de 30 PSI em calibrador digital.

No dia 05 de outubro (14 dias após a data de aplicação) foi realizada a pressão dos pneus, tendo como referência o monitor calibrador digital, e observamos que permaneceu em 30 PSI.

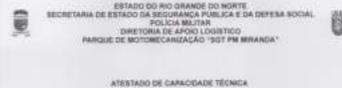
No dia 20 de outubro (30 dias após a data de aplicação) foi realizada uma nova verificação, tendo como base o mesmo calibrador digital, e foi constatado que a pressão dos pneus permaneceu em 30 PSI.

Diante do exposto, concluímos que o selante aplicado, em um período de 30 dias, manteve a pressão dos pneus mantida, demonstrando comprovada eficácia na manutenção da pressão dos pneus.

1. Redução no custo de manutenção;
2. Aumento na vida útil dos pneus;
3. Redução no índice de paradas para manutenção;
4. Aumento da disponibilidade dos veículos e equipamentos;
5. Redução no índice de perda de pneus por infiltração no banco de pneus.

Nota: 20 de outubro de 2021

### MILITARY POLICE RIO GRANDE DO NORTE



#### ATESTADO DE CAPACIDADE TÉCNICA

Afirmamos que no período de dia 21 de setembro a 20 de outubro do corrente ano foi efetuada a aplicação do produto Selante de Pneus Preventivo Contra Furios - XTIRE na frota de manutenção MITSUBISHI L200 TRITON SPORT GLS 4x4, de placa G0V986 da CPQD, visando comprovar a eficiência do produto quanto à manutenção da pressão dos pneus, como foi empregado uma pressão de 30 PSI em calibrador digital.

No dia 05 de outubro (14 dias após a data de aplicação) foi verificada a pressão dos pneus, tendo como referência o monitor calibrador digital, e observamos que permaneceu em 30 PSI.

No dia 20 de outubro (30 dias após a data de aplicação) foi realizada uma nova verificação, tendo como base o mesmo calibrador digital, e foi constatado que a pressão dos pneus permaneceu em 30 PSI.

Diante do exposto, concluímos que o selante aplicado, em um período de 30 dias, manteve a pressão dos pneus mantida, demonstrando comprovada eficácia na manutenção da pressão dos pneus.

1. Redução no custo de manutenção;
2. Aumento na vida útil dos pneus;
3. Redução no índice de paradas para manutenção;
4. Aumento da disponibilidade dos veículos e equipamentos;
5. Redução no índice de perda de pneus por infiltração no banco de pneus.

Nota: 20 de outubro de 2021

*[Signature]*  
Vale Pereira Filho - Maj PM  
Chefe do Parque de Manutenção

### MILITARY POLICE PARANÁ



#### ATESTADO DE CAPACIDADE TÉCNICA

Afirmamos que foi efetuada a aplicação do produto Selante de Pneus Preventivo Contra Furios - XTIRE no dia 02/12/2021, para comprovar a eficácia do produto na vedação de furos na banda de rodagem dos pneus, manutenção da calibragem de ar e não interferência no balançamento e dirigibilidade do veículo.

A aplicação foi efetuada em uma viatura GM ARBTA placa EEF - 4166.

Após a aplicação efetuou-se 2 perfurações no pneu traseiro esquerdo, realizado interno médio e a pressão antes e após a perfuração onde se comprovou a vedação instantânea, sem nenhuma perda de ar, sendo antes e após perfuração. E após foram realizadas medições sucessivas nos dias 09/12 - 16/12 - 23/12 - 30/12 - 06/01 onde apresentamos não se detectou nenhuma perda de pressão (0 PSI).

Tudo o processo de aplicação, perfurações, checagem da pressão após o furo foi registrado por foto e vídeo.

Desta forma, atestamos que o produto, nos condições em que foi testado, de fato cumpriu no período de 32 dias, sua função de selante automático de perfurações na banda de rodagem dos pneus, conforme informado pelo fabricante, sem nunca ter causado nenhum tipo de dano ou quaisquer outros efeitos negativos aos pneus ou rodas dos veículos/veículos, além de que a pressão de ar se manteve e dentro (0PSI).

ATESTAMOS TAMBÉM QUE NÃO HOUVE ALTERAÇÃO DA DIRIGIBILIDADE.

Alocamos:

*[Signature]*  
Tenente Araújo - CMM Polícia Militar São Paulo

### MILITARY POLICE SÃO PAULO (AUTO)



#### ATESTADO DE CAPACIDADE TÉCNICA - VIATURA AUTOMÓVEL

Afirmamos que foi efetuada a aplicação do produto Selante de Pneus Preventivo Contra Furios - XTIRE no dia 02/12/2021, para comprovar a eficácia do produto na vedação de furos na banda de rodagem dos pneus, manutenção da calibragem de ar e não interferência no balançamento e dirigibilidade do veículo.

A aplicação foi efetuada em uma viatura FORD GUNCHO placa EDA-1218 (PMSP) N 11.8.

Após a aplicação efetuou-se 2 perfurações no pneu traseiro esquerdo, realizado interno médio e a pressão antes e após a perfuração onde se comprovou a vedação instantânea, sem nenhuma perda de ar, sendo antes e após perfuração. E após foram realizadas medições sucessivas nos dias 09/12 - 16/12 - 23/12 - 30/12 - 06/01 onde apresentamos não se detectou nenhuma perda de pressão (0 PSI).

Tudo o processo de aplicação, perfurações, checagem da pressão após o furo foi registrado por foto e vídeo.

Desta forma, atestamos que o produto, nos condições em que foi testado, de fato cumpriu no período de 32 dias, sua função de selante automático de perfurações na banda de rodagem dos pneus, conforme informado pelo fabricante, sem nunca ter causado nenhum tipo de dano ou quaisquer outros efeitos negativos aos pneus ou rodas dos veículos/veículos, além de que a pressão de ar se manteve e dentro (0PSI).

ATESTAMOS TAMBÉM QUE NÃO HOUVE ALTERAÇÃO DA DIRIGIBILIDADE.

Alocamos:

*[Signature]*  
Tenente Araújo - CMM Polícia Militar São Paulo

### MILITARY POLICE SÃO PAULO (PESADOS)



#### ATESTADO DE CAPACIDADE TÉCNICA - VIATURA CAMINHÃO (GUNCHO)

Afirmamos que foi efetuada a aplicação do produto Selante de Pneus Preventivo Contra Furios - XTIRE no dia 02/12/2021, para comprovar a eficácia do produto na vedação de furos na banda de rodagem dos pneus, manutenção da calibragem de ar e não interferência no balançamento e dirigibilidade do veículo.

A aplicação foi efetuada em uma viatura FORD GUNCHO placa EDA-1218 (PMSP) N 11.8.

Após a aplicação efetuou-se 2 perfurações no pneu traseiro esquerdo, realizado interno médio e a pressão antes e após a perfuração onde se comprovou a vedação instantânea, sem nenhuma perda de ar, sendo antes e após perfuração. E após foram realizadas medições sucessivas nos dias 09/12 - 16/12 - 23/12 - 30/12 - 06/01 onde apresentamos não se detectou nenhuma perda de pressão (0 PSI).

Tudo o processo de aplicação, perfurações, checagem da pressão após o furo foi registrado por foto e vídeo.

Desta forma, atestamos que o produto, nos condições em que foi testado, de fato cumpriu no período de 32 dias, sua função de selante automático de perfurações na banda de rodagem dos pneus, conforme informado pelo fabricante, sem nunca ter causado nenhum tipo de dano ou quaisquer outros efeitos negativos aos pneus ou rodas dos veículos/veículos, além de que a pressão de ar se manteve e dentro (0PSI).

ATESTAMOS TAMBÉM QUE NÃO HOUVE ALTERAÇÃO DA DIRIGIBILIDADE.

Alocamos:

*[Signature]*  
Tenente Araújo - CMM Polícia Militar São Paulo

## O que os clientes falam de Xtire:

- ✓ Effective in sealing holes
- ✓ Does not damage tires/wheels
- ✓ Allows you to retread the tire
- ✓ Reduces fuel consumption
- ✓ Increases tire life

- ✓ Dramatically reduces downtime for maintenance
- ✓ Increases vehicle availability
- ✓ Reduces the rate of tire loss from oxidation, explosion and casing damage

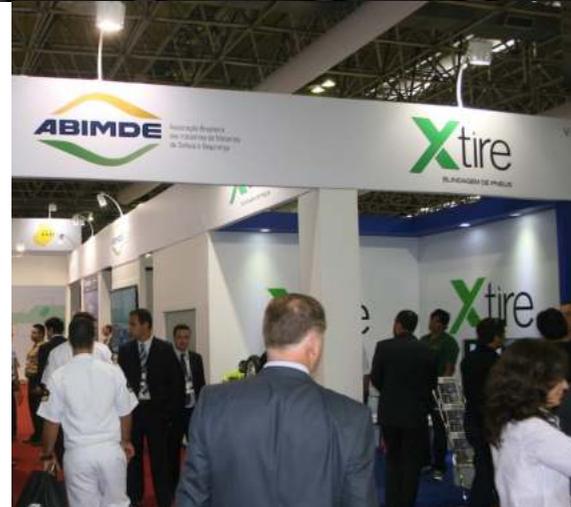
# XTIRE PARTICIPATION IN ABIMDE EVENTS

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LAAD

Rio de Janeiro



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# VÍDEOS PRINCIPAIS

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**Extreme Protection**



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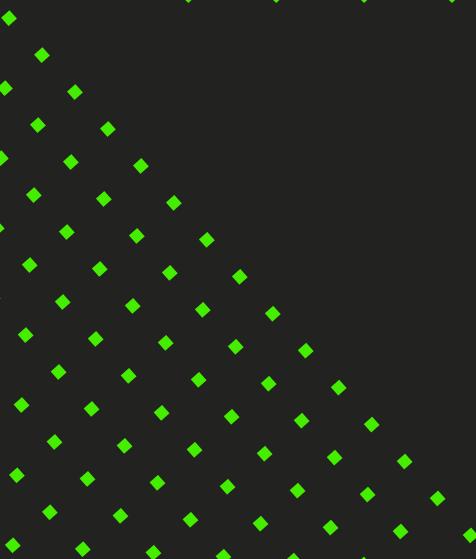
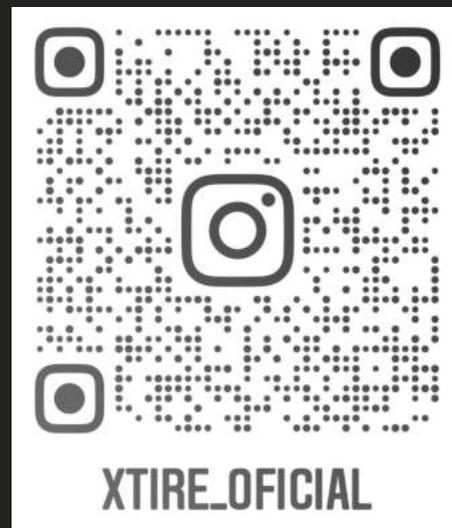
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