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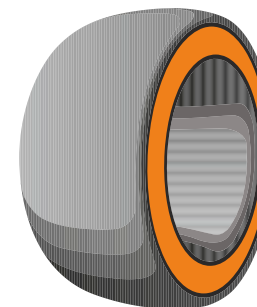
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**PERSEA**

**Tyre Sealant**

## ***TECHNICAL MANUAL***

# **PERSEA Tyre Sealant:**

## ***Technical Manual***

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## **I: INTRODUCTION**

Vehicle puncture has been a nagging problem, resulting into:

- ➔ Delay in reaching the destination, losing critical time
- ➔ Unplanned and Unexpected Vehicle downtime
- ➔ Increased Cost of repair
- ➔ Extra time/cost for replacement Vehicle (if required)
- ➔ In a seamless supply chain scenario possible loss of critical edge/production time
- ➔ Unwanted Stress and undue worries

There has always been this need and an acutely felt desire of what if:

- ➔ One can forget about Puncture problems forever
- ➔ Never get stranded due to flat Tyres
- ➔ Drive confidently on any Road on any terrain in any season...
- ➔ Be sure that Driver will have better vehicle control even during high-speed blow out...

**PERSEA Tyre Sealant** is one such product that not only:

- ✦ Keeps all Pneumatic Tyres puncture free for life but also
- ✦ Enhances Tyre life,
- ✦ Increases fuel efficiency,
- ✦ Reduces load on the Engine
- ✦ Decreases vehicle downtime cost and
- ✦ Helps in protecting our environment

**PERSEA** is made in India, has world-class technology and comes from leader & pioneers of this product category in India.

### **What is "PERSEA"**

PERSEA is a highly contrived, liquid-gel based tyre sealant, which is non-inflammable, non-toxic, chemically inert and completely safe to use. PERSEA seals the tyre puncture of ¼" or 6mm diameter in the tread (Crown) area of the tubeless tyre instantly with no visible air loss. PERSEA is a result of extensive field trials on Indian Roads & unique combination of technology, quality and confidential RM composition.

## **How it works**

Product is injected into the tyre before a puncture occurs (as a preventative measure). When the tyre rotates, the sealant then coats the inner lining of the tyre surface as a means of protection.

When a puncture occurs, the centrifugal force of the tyre alongside the internal air pressure forces the sealant into the puncture sealing it permanently, avoiding loss in air pressure and rapid deflation and allows the motorist to keep driving, never realizing he had a puncture.

### **"PERSEA" gives Peace of Mind:**

- ✦ **Confidence** of Puncture free and safe ride every time
- ✦ **Permanent Fix** it is not a "limp home", it seals the tyre permanently
- ✦ **Single Application** is sufficient to protect the tyre against punctures.
- ✦ **Protects tyre inner surface:** PERSEA forms a coating that clings to the inner surface of the tyre and wheel assembly providing protection from rust & corrosion
- ✦ **Will not Void Tyre warranty:** as product's chemical composition is completely compatible with tyre components
- ✦ **Safety Factor:** Sealant does not mask or hide damage that could affect the safety of the tyre

### **PERSEA the Differentiator:**

- ✦ Specially **made for Indian climate & terrains**
- ✦ **Customized product** for specific vehicle requirement
- ✦ **Does not dry up** after few months while inside the tyre
- ✦ **Tested** as per Bureau of Indian Standard (**BIS**) **norms** by independent & most reputed laboratory for its **Quality and Performance** levels.
- ✦ PERSEA meets every **safety specifications** and is **ROHS compliant**

### **PERSEA extends Tyre Life:**

TYRE industry magazines, trade associations, TYRE manufacturers and the Retread Industry all agree under inflation is the number one cause of premature TYRE failure. **PERSEA Tyre Sealant** virtually eliminates under inflation caused by air migration, porosity and punctures.

**PERSEA Tyre Sealant** has an additive to reduce the detrimental effects related to heat buildup in TYRE casings. After installing **PERSEA**, careful monitoring showed that as compared to untreated ones **PERSEA** treated TYRES had significant reduction of incidences of dry rot, typically caused by outside contaminants and UV radiation. **PERSEA Tyre Sealant** cannot restore an old TYRE that has lost elasticity, however, it will inhibit and retard subsequent casing degradation.

RETREADING is a major cost savings for fleets. The more times a casing can be retreaded, the lower the cost per kilometer. This represents a substantial savings. Plus, retreading reduces the environment impact by reducing the number of casings being recycled.

**PERSEA Tyre Sealant** will enhance the TYRE casing in many ways. In new Tyres, as well as Retreads, **PERSEA** ELIMINATES POROSITY and AIR MIGRATION, LOWERS HEAT and REDUCES the occurrence of TREAD, BELT and ZIPPER SEPARATIONS.

## **II: PROCEDURE FOR INSTALLATION**

1. Ensure that Wheels are pre-balanced.
2. Put the wheel on Jack and remove the Air Valve of the Tyre and release the air.
3. Fit the Pump nozzle with Tyre Valve stem.
4. Keep the tyre valve stem between 4 to 6 o' clock position so that while filling the sealant it goes inside the Tyre / Tube rather than falling on rim or other side of tube
5. One full stroke of Pump will inject 100 ml of Tyre Sealant
6. Inject the recommended amount of **PERSEA Tyre Sealant** into Tyre through the pump,
7. After injecting sealant, remove the pump nozzle, Change the position of tyre valve stem to 4 o' clock position and put some air into the tyre, to clear off the left over sealant which may be inside the tyre nozzle. This procedure will ensure that air valve does not stick inside later on.
8. Put the Air valve back and inflate the tyre with required amount of air keeping the air nozzle around 4 o' clock position.
9. Repeat the procedure in all Tyres of the vehicle. Drive the vehicle around 500m to 1 km for sealant to spreads evenly inside the tyre.

### **Important points to remember**

1. **PERSEA Tyre Sealant** should never be less than the prescribed quantity.
2. Always inject liquid having valve nozzle of the tyre between 4 to 6 o' clock position so that sealant falls on the tyre not on rim.
3. Inflate the tyre after injecting the sealant in 3 or 4 o' clock position, so that the air does not bubble out the sealant.

### **Do's:**

- ☒ Install tyre sealant at 6'o clock position
- ☒ Use accurate quantity.
- ☒ Use new tube in case of Tube Tyre
- ☒ Air Pressure should be accurate for best performance of PERSEA tyre sealant.
- ☒ Wheel Balancing should be done prior tyre sealant installation.
- ☒ Keep the Sealant Drum in a cool and dry place.

### Don'ts:

- ❌ Never install less quantity of **PERSEA** sealant than the prescribed one.
- ❌ Never install **PERSEA** in flat tyre, always use jack to lift tyre in 4-Wheeler or main stand for 2-wheeler.
- ❌ Never install **PERSEA** between 9 to 3'o clock position of Tyre valve stem.
- ❌ Tyre Sealant quantity should be equal in all Tyres.
- ❌ Never put water or mix any other thing into **PERSEA Tyre Sealant**, as that would disturb its delicately balanced composition and affect the performance negatively.

### ***III: Trouble Shooting***

#### ➤ **UNABLE TO PUSH PUMP HANDLE DOWN**

Never try to force the pump handle down.

If the handle does not move, make sure that the:

1. Air Valve is removed from the Tyre Valve stem before connecting the Pump.
2. Pump's Shut-off valve is in the open position
3. Be sure that the pump valve is snapped onto the tyre valve core
4. Shut-off the pump valve and disconnect the pump
5. Check that Pump nozzle is not clogged by pushing the pump handle slightly & clearing the nozzle tip
6. Check if the Tyre valve stem is blocked, remove the debris.
7. Push little air inside the tyre to clear the path
8. If the valve core becomes clogged, it is important to clean the **PERSEA** fibers and residue off before reinstalling into the valve stem.
9. Connect the pump again into the Tyre Valve & inject the required quantity

#### ➤ **PUNCTURE DOES NOT SEAL**

**WHEN A PUNCTURE DOES NOT SEAL PROPERLY, CHECK FOR THE FOLLOWING:**

1. Improper tube size for TYRE.
2. Lack of **PERSEA** product in the TYRE.
3. Puncturing object has been in TYRE for over a month.
4. Puncturing object or puncture itself is larger than 1/4" (6 mm) diameter.
5. Rips, tears or cord damage inside TYRE/Tube.
6. Shifted belts.
7. Sidewall puncture.
8. Stretched rubber, sometimes found in over-inflated TYRES.
9. Tread separation (inside TYRE).
10. Valve leaks.

#### ➤ **TYRE UNABLE TO HOLD AIR PRESSURE ONLY AIR IS ESCAPING**

This is a positive indication that there is an insufficient amount of **PERSEA** in the Tyre, or the Tyre may have internal damage. Re-enter the wound with a pointed object (ice pick) and move it back and forth. As it is extracted, it will draw **PERSEA** through the wound.

If no **PERSEA** can be drawn through the wound, then definitely there is not enough sealant in the Tyre to create a coating and provide a reserve. Perhaps not enough **PERSEA** was initially installed or the Tyre has received numerous punctures or a dangerous puncture that has left an insufficient amount of **PERSEA** in the Tyre.

#### **AIR AND PERSEA BLEEDING**

(**PERSEA** cannot mask or hide a dangerous wound)

Air and **PERSEA** will bleed out of a wound, only if the wound is too large or the puncturing object has sufficiently damaged the Tyres inner structure, this is a potentially dangerous Tyre. Dismount the Tyre and inspect, do not plug or repair by any external method! The bleeding effect is a major function of **PERSEA**, providing a safety factor.

#### **AIR LOSS DUE TO AIR MIGRATION**

Due to the various locations of air migration, it may take more than 5 to 10 kilometers of driving for **PERSEA** to eliminate the problem air leaks. If air migration persists, increase air pressure 10% to 15% (do not exceed maximum allowable Tyre pressure as recommended by the Tyre manufacturer) and drive vehicle approximately two days, then reduce air pressure to normal setting. By increasing air pressure, it opens the pores and forces **PERSEA** into the problem area, eliminating air migration.

#### **SIDEWALL PUNCTURE**

**PERSEA**'s assurance is for the tread area of the Tyre only. The tread area has sufficient rubber and plies for adequate flexing and recovery. Sidewall construction is extremely thin, especially in radial Tyres. **PERSEA** is capable of providing minor repairs to the sidewall/crown areas. But due to vast variance in Tyre manufacturing and subsequent wounds that may severely damage the Tyres structural integrity, **PERSEA** does not consider sidewall/crown repairs as positive repairs.

#### **MAJOR DAMAGE**

If a Tyre serviced with **PERSEA** receives major damage, it cannot hold air pressure. **PERSEA** is designed to slowly release air pressure, providing a safety factor that is not found in any Tyre. Regardless of how small or how large the wound may be, **PERSEA** can not mask or hide a dangerous wound. Depending on the severity of the wound, **PERSEA** and air will bleed, until all of the air and **PERSEA** have been exhausted.

#### ➤ **UNABLE TO ADD AIR TO THE TYRE**

##### **VALVE CORE BLOCKAGE**

If air does not go into the Tyre, check the valve core, it may be clogged. This will occur if air pressure was checked without first clearing the **PERSEA** from the valve stem, or if there is a defective valve core. If the core is known to be in good condition, then simply rinse it with water and reinstall. It may be more cost effective to replace a valve core.

#### ➤ **HOW TO REPAIR A TYRE CONTAINING PERSEA**

##### **TUBELESS TYRES**

Dismount the Tyre and wipe the **PERSEA** away from the damaged area with a damp rag, dry the area that is to be repaired, buff and repair as normal. If the repairs (including mounting and dismounting) are completed within 2 hours, it is not necessary to remove the remaining **PERSEA** from the Tyre. Remount and add any additional **PERSEA** that may have been lost through the wound or that was removed to perform the repair.

##### **TUBE TYPE TYRES**

Tubes can be easily repaired. **PERSEA** will not cause a problem, simply spread the tube over an anvil or other work area. Move the **PERSEA** away from the damaged area by applying finger pressure on the tube and pressing away from the damage, thereby forcing the **PERSEA** away from the wound. Wipe the area with a damp rag, dry thoroughly and repair as normal. We recommend using a hot patch. If you do use cold patches, be aware that some adhesives are effected by Glycol (a chemical used in the **PERSEA** formulation). This type of adhesive is not common, however it is not compatible. To check for compatibility, rub **PERSEA** on a dry sample of the adhesive. If the adhesive does not soften or dissolve, then there should not be any adverse reaction. Make sure after repairing the tube to replace any **PERSEA** that has been lost. We recommend that radial tubes be used due to their superiority



#### **IV: TYRE SIZES, APPLICATIONS & SITUATIONS TO AVOID**

##### **APPLICATIONS AND SITUATIONS NOT RECOMMENDED FOR PERSEA APPLICATION:**

**PERSEA Tyre Sealant** will provide its many benefits to the vast majority of tube and tubeless TYRES, however, there are a few applications or TYRE conditions where installation is not recommended.

**PERSEA Tyre Sealant** is NOT RECOMMENDED for:

1. Any TYRE or vehicle with previously known VIBRATION ISSUES that is to be operated at Highway speed.
2. EXTREME HIGH PERFORMANCE VEHICLES (sports cars, roadsters, formula cars).
3. Passenger vehicles (including SUVs) fitted with OVERSIZED RIMS and TYRES. In many cases these void vehicle manufacturers' warranties and contribute to harsh or nervous ride capable of damaging suspension components prematurely.
4. Any TYRE with BADLY WORN TREAD, characterized by cupped, scalloped or saw-toothed distortions. This is a general indicator for shocks, struts, steering and / or suspension components in need of repair or replacement.
5. Low profile TYRES (50, 45, 40 series and lower).
6. Heavy equipment & Tractor TYRES containing CALCIUM CHLORIDE or WATER.

**CAUTION: If you are intending to treat a TYRE that you suspect has been run flat, there is a high degree of probability that it has sustained damage. While PERSEA can often slow the rate of air loss, it cannot correct damage sustained to the TYRE's belts, cords and structure.**

#### **V: TUBE-TYPE TYRES**

Tubes can be found in almost every conceivable application, from personal mobility equipment, such as wheelchairs, bicycles, scooters, motorcycles & Three wheelers, to Trucks, Buses, giant mining machines. Tubes present particular and unique challenges not present in tubeless TYRES.

Tubes tend to squirm inside a TYRE as the TYRE rotates, and the constant flexing caused by the roughness of the road surface will increase the chances of tube failure. As speed increases so does the squirming of the tube. This condition is magnified if the tube is underinflated. To minimize this, inflate the TYRE to the maximum recommended air pressure indicated on the TYRE's sidewall.

Installing **PERSEA Tyre Sealant** in a tube will provide substantial puncture protection and enhanced air retention. Because **PERSEA** is not coming in direct contact with the TYRE, it cannot enhance the casing or protect the internal structure of the TYRE.

When a TYRE sustains a puncture, the puncturing object penetrates the TYRE and tube and **PERSEA** will seal around the puncturing object, holding the air within the tube. If the object rips the tube, or rocks as the TYRE rotates, **PERSEA** can only slow the air loss. This is often the case when the object is of an irregular shape or the wound is too large.

At the earliest opportunity, remove the puncturing object, then rotate the TYRE or drive the vehicle allowing **PERSEA** to reenter the wound. This is best performed where an air source is available. If a large object has punctured the TYRE, leave it undisturbed and take the vehicle in for TYRE repair or replacement as required.

It is recommended that a TYRE inspection program be initiated for vehicles with tube TYRES travelling over public roads (over 50 Km/h). Whenever possible, use radial tubes. Radial tubes are thicker, more durable and provide for better PERSEA compatibility and performance.

**PERSEA** is somewhat less effective in tube-type TYRES as compared to tubeless TYRES.

## **VI: MOUNTING SOLUTIONS**

### **COMPATIBILITY WITH PERSEA**

The majority of mounting solutions are soap-based compounds, often derived from the combination of various oils, saponified with an alkaline material, usually sodium or potassium hydroxide and sometimes a lithium soap (possibly a stearate) mixed with carbon to further enhance lubricity.

**PERSEA** is compatible with the vast majority of chemicals used in mounting solutions. **PERSEA**'s formulation can absorb a small amount of this material without degradation of performance. The amount of solution that is required to adequately lubricate a TYRE bead will not affect **PERSEA**'s balanced formulation.

### **POSSIBLE INTERACTIONS**

When using a TYRE mounting solution with **PERSEA** please note:

- a) Some mounting solutions are in a concentrated form, which must be mixed with water. If an excessive amount of water is used, it can promote rust and corrosion on the rim. Always follow manufacturer's recommendations.
- b) Using an excessive amount of solution in the TYRE will degrade **PERSEA**'s balanced formula. This can also adversely affect TYRE balance.
- c) Avoid using extreme amounts of mounting solution as it can migrate to the tread area where it can contaminate the **PERSEA**. This can severely diminish **PERSEA**'s sealing capabilities. Additionally, it may form a wet and slippery film that can seep through pores or puncture sites and eventually into the belt where it can cause corrosion and possible separations.

**Note:** Mounting solutions are a major source of moisture and sometimes contain incompatible substances. Whenever possible choose pre-mixed products. This helps avoid issues arising from poor quality water and improper mixing. Some water based products do not contain rust inhibitors. Insist on one that contains rust and corrosion inhibitors.

## **VII: OUT-OF-ROUND CONDITION**

### **Check for out-of-round WHEEL and TYREs prior to installing PERSEA Tyre Sealant**

#### **CHECKING FOR AN OUT-OF-ROUND CONDITON**

To check for an out-of-round condition, secure a pointer tool so that it will be perfectly steady. Bring the tool to the object (TYRE or wheel) to be checked. As it touches the object, back off a slight amount. This will provide a uniform distance between the tool and the closest portion of the object being tested. If the distance between the two opens and closes visually, this indicates an out-of-round condition. The more the distance opens and closes, the more out of round the object is.

#### **POINTER TOOL**

You may utilize any object as a pointer tool. It is not necessary to use a sharp object. A sharp point may actually hinder visual inspection of the distance between the tool and the portion of the TYRE being checked. Always spin the TYRE on a high-speed spin balancer.

#### **TYRE**

The out-of-round condition is usually more pronounced in the tread area. Using the pointing tool as described above, check the outer edge of the tread, then the center of the tread and finally the inner edge of the tread.

#### **WHEEL**

A wheel can be bent or out of round and may cause one problem or aggravate another problem. Using the pointer tool as described above, check the wheel both on the front edge for in and out movement and again on the edge closest to the TYRE for up and down movement



## **VIII: OUT-OF-BALANCE SITUATION**

### **REMEMBER! Always balance Tyres PRIOR to installing PERSEA TYRE SEALANT**

TYRE balance is most critical in high-speed passenger vehicles and light trucks. Small front wheel drive passenger vehicles and light trucks are known to transmit more road, wheel and TYRE vibrations into the passenger compartment.

A vehicle with good wheels and TYREs, when balanced should take an average of three quarters to one and one half ounces of weight per TYRE. The need for an excessive amount of weight indicates a problem. Perform any corrective procedures prior to installing **PERSEA Tyre Sealant**. In this case, **PERSEA** cannot correct the problem and, in fact, may amplify and increase vibration.

Always visually inspect the TYRE for even and consistent tread as this is a common source of vibration. A simple method is to run the flat of your hand over the top of the TYRE tread (from front to back). If you feel an excessive amount of unevenness (saw tooth), then this TYRE is susceptible to vibration. This condition is often due to worn shocks and suspension causing the wheels to be out of alignment. Older TYREs that appear weather checked can absorb a little more **PERSEA** than the average TYRE. In rare cases, slightly more **PERSEA** should be installed (no more than 10%).

It is not uncommon to experience a slight vibration between 80 and 100 kmph during the first five miles driven after **PERSEA** installation. This is normal and will subside within few kilometer.

**PERSEA Tyre Sealant**'s liquid gel solution clings to the inner surface of a TYRE. **PERSEA** resists adverse forces that attempt to pull it away and exaggerate any small vibration. This is why it is important to always balance TYREs PRIOR to installing **PERSEA**.

## **IX: AVOIDING VALVE CORE PROBLEMS**

### **CLEARING VALVE AFTER PERSEA INSTALLATION**

After installing **PERSEA**, blow a small amount of air through the valve to clear any remaining **PERSEA** residue. This is the time to set correct air pressure according to manufacturer's specifications.

### **CHECKING Air pressure**

If checking air pressure where an air source is available, momentarily connect air hose to allow a small blast of air to clear any sealant that may have traveled into the valve. Connect your gauge as normal to take reading. Reset air pressure if required.

If checking air pressure away from an air source, use a sharp object to momentarily depress the valve pin causing a small amount of air to be released, clearing any sealant from the valve. Connect your gauge as normal to take reading. Reset air pressure if required.

Following above procedures will avoid the possibility of clogging or impeding the proper function of the gauge. If a valve core shows signs of clogging, simply remove, inspect for damage and rinse in clean water. Reinstall and reset correct air pressure.

### **Note!**

Occasionally, a valve core is clogged prior to performing an air pressure check or installing **PERSEA**. This is often due to a missing valve cap allowing debris to become lodged in the valve. Remove and clean or replace as required.

## **X: VIBRATIONS**

### **What to look for when vibration is a problem!**

Installing the recommended amount of **PERSEA** will not create a vibration or balance problem. Pre-existing balance or vibration problems should be corrected prior to the installation of **PERSEA**, as they may be amplified. Excessive wheel vibrations can pull **PERSEA** off the inner tread surface and may actually increase the intensity of the vibration.

It is important to recognize that not all vehicle vibrations are related to TYRE balance. Many originate from other sources such as steering, suspension, shock absorbers and TYRE irregularities. Below are some causes for...

#### **Excessive Vibration** (Up-down movement)

##### **Check for the following:**

- ☑ Out-of-round TYRE or rim
- ☑ Excessive flat spots on TYRES
- ☑ Worn-out shock absorber
- ☑ Shifted belts
- ☑ Tread separation

#### **Excessive Lateral Movement** (Side-to-side wobble)

##### **Check for the following:**

- ☑ Loose or worn out front-end components
- ☑ Improperly adjusted/loose or damaged wheel bearings
- ☑ Shifted belts
- ☑ Bent wheels/rims and axles

## **XI: RUST AND CORROSION**

Rust and corrosion form when there is moisture present in the air within a TYRE/wheel. As the vehicle is driven, the TYRE gets hot and the moisture will vaporize. Some will migrate through the pores of the TYRE, while the majority will condense onto the wheel possibly forming rust and corrosion. This repeated vaporizing and condensation action would eventually concentrate on the wheel. Most people do not realize that moisture migrating through the TYRE will cause the steel belts to rust.

It is very important to drain water from all air sources (compressors and lines) as a daily routine procedure. These are the main sources of moisture in a TYRE. If possible, an air dryer should be attached to all air hoses. Make sure the TYRE is dry and free of debris prior to mounting. Mounting solutions are a major source of moisture and often contain incompatible substances. Whenever possible choose pre-mixed mounting solutions. This helps avoid issues arising from poor quality water and improper mixing. Some water based products do not contain rust inhibitors. Insist on one that contains rust and corrosion inhibitors.

**PERSEA Tyre Sealant** contains RUST PREVENTING AGENTS to protect all types of alloys and steel found in wheels and steel belts. **PERSEA** has the ability to prevent the formation of rust and will inhibit any existing rust and corrosion. **PERSEA** protection begins on the inside and protects throughout. Additionally, **PERSEA** prevents outside contaminants from entering a TYRE through a puncture site due to the sucking effect caused by TYRE flexing.

**Note:** Even a small amount of water in a TYRE can dilute and reduce the effectiveness of **PERSEA**.

## **XII: AVOIDING POTENTIAL TREAD SEPARATIONS & ZIPPER RUPTURES**

A Zipper rupture is a circumferential rupture in the mid-sidewall of a steel-cord radial truck TYRE. These are particularly dangerous as they are unpredictable and often occur with little or no warning to alert the driver or TYRE service provider. They are frequently accompanied by a deafening blast with the explosive force of a pound of dynamite leaving a 10" to 36" zipper rupture in the sidewall. If this occurs while the TYRE and wheel are removed from the vehicle, but not yet in a cage, it can be life threatening. Fortunately, it's avoidable.

### **How They Occur**

Steel-belted radial truck TYRES utilizes steel cord sidewall plies to maintain the strength and integrity of the TYRE structure. They support the chamber, containing the air that carries the load. A puncture, leaking valve or any source of air migration (slow leaks) can lead to substantial, though not always apparent air loss. TYRES that are under-inflated or overloaded will experience increased flexing and heat buildup. This produces severe bending of the steel cords. Consider that a truck TYRE rotates hundreds of times per kilometer and thousands of times per hour under a heavy load. Any TYRE known to have run at less than 80% of recommended air pressure could possibly have permanent steel cord fatigue. Quite often a pressure check reveals that one or more TYRES are substantially below this 80% threshold and could legally be considered to have run flat. This is the major cause of tread separations and zipper ruptures.

### **New TYRES**

During the market survey done by **PERSEA** team in India, it has been observed that, there are as many tread separations in new TYRES as in Retreads. This is due to air loss and air migration beneath the tread. The incidences of manufacturing defects in new and retread Tyres as the cause is low.

### **Retread TYRES**

The repair, preparation and inspection of used casings are critical to the performance and longevity of the finished product. The smallest amount of air or improper adhesion between the cap and casing will expand as heat increases from deflection and road surface friction and can lead to de-lamination, tread separation and blowouts.

### **Prevention**

The number one cause of tread separation is porosity and air migration. **PERSEA TYRE SEALANT** provides a uniform fluid/fiber coating that prevents air migration by sealing porosity and punctures as they occur. Additionally, PERSEA draws heat from the tread and transfers it to the wheel and sidewall where it is more efficiently radiated to the outside air. Heat and centrifugal force developed within the rotating TYRE will not pull **PERSEA** from the area beneath the tread or degrade its composition.

For maximum benefit, install **PERSEA TYRE SEALANT** into new or newly re-treaded TYRES prior to placing them into service.

### **XIII STORAGE & SAFETY**

**STORAGE:** In a cool and dry place.

#### **COMPOSITION & INGREDIENTS**

Chemically inert, Inorganic, Liquid Gel material primarily consisting of Glycol, Gum & Ground Rubber.

#### **HAZARD IDENTIFICATION**

Main Hazards: Not Classified as Dangerous

Hazardous Components in Product: - None

#### **HUMAN EXPOSURE & MEASURES:**

##### **Symptoms of exposure**

- ✦ Eyes: irritation
- ✦ Skin: possible irritation on prolonged contact
- ✦ Inhalation: irritation to respiratory tract
- ✦ Ingestion: irritation to the gastrointestinal tract

##### **First-Aid Measures**

- ✦ Eyes: flush with water for 15 minutes. Consult a physician if irritation persists
- ✦ Skin: wash with soap and water. Remove contaminated clothing and footwear
- ✦ Inhalation: remove to fresh air
- ✦ Ingestion: give two glasses of water. Induce vomiting, call a physician immediately

##### **Fire Fighting Measures**

- ✦ Extinguishing Media: None,
- ✦ Product Is Non Inflammable Liquid.
- ✦ Fire Explosion Hazards: None
- ✦ Means Of Protection: None Necessary
- ✦ Other Recommendations: None

### **ECOLOGICAL INFORMATION**

- ✦ Mobility - The Product Will Dissolve Slowly In Water
- ✦ Degradability - The Product Is expected to be Readily Biodegradable
- ✦ Bio-Accumulation - Not Expected To Bio-accumulate
- ✦ Non Toxic – No known study identified, any harm to Tyres, Rims or Environment

#### **DISPOSAL**

- ✦ Small quantities should be diluted with large amount of water and run to waste.
- ✦ Large quantities should be disposed of by landfill Dispose in accordance with local and national regulations using an approved disposal company

**PERSEA** is tested & works in all weather condition, environment & temperature range of (- 5 to +55°C)

**PERSEA Tyre Sealant** been tested by IRMRA as per BIS norms and cleared Chemical Safety and Physical performance Test parameters (detailed test result copies are available on request)

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  - ✦ Technical information provided in this manual is subject to change from time to time, as product improvement is a continuous process.