



iNOVEX INDUSTRIES, INC.

Technical Service Bulletin – 120308

To: All Dealers, Distributors, and Customers
From: Harry Farkhan, Executive Vice President
Subject: Synergies of Using Nitrogen in conjunction with Ride-On TPS

The following bulletin is in response to questions regarding the use of Nitrogen tire fill and its compatibility or effects if any on the Ride-On Tire Protection System (TPS) tire sealants. Please share this information with your customers and employees. So, is it safe to use Ride-On TPS and Nitrogen tire fill together?

The answer is a resounding “YES”. The combination of our Ride-On tire sealants and Nitrogen tire fill have synergistic benefits that transcends the beneficial use of either one by itself.

Most people don’t know that the air that we breathe is comprised of almost 80 percent Nitrogen. Nitrogen (N₂) is a colorless, tasteless, non-toxic gas. The next most common component of air is oxygen (O₂). Together N₂ and O₂ make up approximately 99% of the air we breathe and use to fill tires with.

After years of being used by the airplane industry, racecars, military vehicles, and off road trucks, N₂ has started to catch the attention of the average car owner. Over the past few years N₂ has started appearing in auto dealers and tire shops. N₂ is seen as an added source of revenue (air is still free) for the merchants. It costs on average less than \$0.50 per tire to fill a typical passenger tire with N₂, while merchants charge upwards of \$25.00 per tire for its installation.

The key benefit of N₂ is that it has a larger molecule than O₂, making less permeable. This results in tires that have been filled with N₂ to maintain their set-point pressure 3 to 4 times longer. There are several other benefits for using N₂:

- Tires do not age as quickly as air inflated tires - O₂ causes internal oxidation and aging of the tire liner over time
- Nitrogen is an inert, non-flammable, non-combustible gas
- Nitrogen is a stable gas providing more constant pressure over temperature fluctuations
- Dry gas with no corrosive properties as found in compressed air.

Using N₂ with Ride-On allows for the benefits provided by each product to stack or be cumulative resulting in a synergistic benefit that transcends the use of either product by itself. Therefore we highly recommend the use of N₂ with Ride-On. Other than the combined benefits of minimizing porosity air loss, one of the biggest benefits of using N₂ with Ride-On is that the introduction of contaminants and moisture will be minimized.

Although Ride-On has some resistance to moisture and contaminants normally found in tires, over time introduction of too much moisture can cause the product to lose its ideal viscosity and adhesion to the inner liner of the tire. This can cause the product to move excessively resulting in some ride and balance issues. The added moisture can also cause pitting and corrosion of wheels over time. Since N₂ is dry and clean, it allows Ride-On to stay at its ideal condition

iNOVEX INDUSTRIES, INC.

45681 Oakbrook Court • Unit 102 • Sterling • Virginia 20166 • USA

Phone: 703-421-9778 • Fax: 703-421-1967 • e-mail: info@ride-on.com • <http://www.ride-on.com>

Member: Tire Industry Association • Tire Retread Information Bureau • American Trucking Association



throughout the expected life of a tire. O₂ also causes aging and oxidation of Ride-On over time. By using N₂, you retard this process and allows Ride-On maintain its peak performance longer.

Below are some of the key benefits of O₂ and Ride-On and whether their benefits are cumulative.

Features/Benefits	N ₂ Alone	Ride-On Alone	Ride-On + N ₂
Reduces porosity air loss	Good	Good	Best
Extends tire life	Good	Better	Best
Keeps tires running cooler	Good	Better	Best
Improves vehicle handling through proper inflation	Good	Good	Best
Is a dry gas with no corrosive properties	Best	N/A – Contains corrosion inhibitors	Best
Improves fuel economy	Good	Good	Best
Balances Tires	No	Good	Better – By helping Ride-On maintain its viscosity and adhesion properties
Reduces road harmonics and dampens road noise	No	Good	Better – By helping Ride-On maintain its viscosity and adhesion properties
Seals punctures and prevents flat tires	No	Good	Better – By helping Ride-On maintain its viscosity and adhesion properties

So, by giving the customers a better and safer ride, improved fuel economy, longer tire life, lifetime automatic balancing, and reduction in flat tires, the use of N₂ and Ride-On in a vehicle are a great combination and worthwhile investment.

Please feel free to contact us if you have any further questions or would like further clarification on the benefits of Ride-On or N₂.

iNOVEX INDUSTRIES, INC.

45681 Oakbrook Court • Unit 102 • Sterling • Virginia 20166 • USA
 Phone: 703-421-9778 • Fax: 703-421-1967 • e-mail: info@ride-on.com • <http://www.ride-on.com>
 Member: Tire Industry Association • Tire Retread Information Bureau • American Trucking Association