



**iNOVEX INDUSTRIES, INC.**  
**Technical Service Bulletin - 032403**

To: Distributors, Tire Companies, and End Users  
From: Harry Farkhan, Vice President  
Subject: Information about flammability of Ride-On TPS as Related to Tire Retreading

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This memorandum provides information regarding retreading tires that have contained our Ride-On TPS tire sealants. Ride-On TPS sealants have been formulated expressly with notion that they should be retread friendly. They are easy to clean with water, and they do not mask injuries in a tire, allowing the NDT machines to find all the punctures. The following information is pertinent for all of our customers and end-users who retread tires:

1. Inovex Industries **requires** that all tires that have contained Ride-On be washed out with water prior to retreading. Generally, most retreading facilities are not equipped to clean tires, and usually reject tires that contain any foreign matter (sealant or otherwise). Therefore, in order to prevent the rejection of the customers' tires, it is imperative that the tires are cleaned out (either by the end-user/customer or by the tire company) prior being sent to the retreading plant.
2. Is Ethylene Glycol flammable? Nearly everything that is organic (carbon based) will burn if the temperature is raised high enough. Even diamonds burn at about 6700 to 7200 Fahrenheit. Inovex Industries uses only "virgin" ethylene glycol in all of our premium sealants (PLT, CHS, and Heavy Duty OTR). According to our ethylene glycol vendor's MSDS, pure ethylene glycol has an auto ignition temperature of **748 F (397.7 C)**. In its wet condition our sealants also contains up to 50% water. The added water raises the auto ignition temperature by a few hundred degrees Fahrenheit. In our demonstrations we routinely apply a torch to our sealants to demonstrate that they are not flammable. The flame temperature of the torches is well in excess of 1000 F. At those temperatures, the surface of the sealant does start to turn black (10 to 20 seconds) but it cannot sustain combustion (no flame).
3. Flash point is defined as the temperature at which a liquid or volatile solid gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the test vessel (NFPA). Our sealants have been independently tested by Ottman & Associates to have a **flash point of 594 F** at sea level (1 atmosphere of pressure). In the higher pressure (hyperbaric) conditions of a curing chamber the flash point will be even higher.

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4. We have heated fresh Ride-On TPS Commercial High Speed (CHS) sealant to 482 F (250C) in our own laboratory oven for over 4 hours. The sealant turned a dark brown color but it never caught on fire. We even subjected the vapors coming off a boiling CHS sample to an open flame as we slowly boiled off all the liquid constituents of the sealant. At no point in this experiment was there any flame or fire observed from the vapors.
5. More than 90 percent of constituents that make up our sealants are water soluble. The remaining constituents are solids that will be removed during the cleanout process. Should some of the fibers be left in the tire there still should be no concern with flammability in a curing chamber. There is no flash point for solids. We utilize a unique proprietary blend of fibers for each Ride-On TPS sealants formula. Our proprietary blend of fibers have an auto-ignition temperature ranging from 450 F to 700 F.

Ride-On TPS sealants have been designed to be retread friendly and not pose any hazards, or flammability issues for retreading facilities. We reiterate that it is imperative that our sealants are washed out of tires prior being sent to the retreading plants. It would be advisable to dry the tires prior to placing them on the NDT machinery. The presence of moisture in a tire can inhibit the detection of punctures.

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