



# Comparative Test Standard Testing Labs Massillon, Ohio May 2011

A test was designed using Accella ReSeal and Slime Sealants. 12 tires were used in total. The tire used was a Carlisle 15 x6.0-6 Turf Saver 2 ply.

Tires were separated into two groups; Tubeless and Tube-type. Six tires in each group.Tubeless: 3 filled with Slime, 3 filled with ReSealTube-type: 3 filled with Slime, 3 filled with ReSeal

Equal volumes of both products were used in each set of tires based on the Slime volume chart. Slime bottles and gallon containers were used and ReSeal's five gallon pail. Weights were carefully checked and air pressure of 14 psi was used as the required pressure for each tire.

With three tires in each group, the testing had the built in potential of having sound statistical data.

# TEST 1

Tubeless:2 filled with Slime, 2 filled with ReSealTube-type:2 filled with Slime, 2 filled with ReSeal

Testing consisted of running two (2) tires from each group at 5 mph and 200 lbs loading on a Dynamometer. Tires received three (3) punctures with either a 1/8 inch awl for the Tube-type or ¼ inch awl for the Tubeless. At the conclusion of the first three punctures each tire was punctured three more times as the speed was elevated to 10 mph and the load moved to 365 lbs, which is the tires' max rated load.

Phases between punctures included warm-up, thirty minute dynamic testing followed by 30 minutes of static testing prior to moving to next puncture.

Each tire of the eight (8) tires run in this manner-four Slime and four Accella ReSeal-passed the testing with the six punctures.

As data is reviewed, subtle differences can be seen between the two products with Accella having a slight edge.

### **TEST 2: UNLIMITED TEST**

The last four tires tested were ones from each set; Slime Tube-type, Slime Tubeless, Accella Reseal Tube-type, and Accella Reseal Tubeless. This test had a new set of test requirements regarding puncture sizes. It was determined that we would test to failure. The tires were started at the 1/8 and ¼ inch levels for Tube-type and Tubeless, respectively. Every new puncture was increased by 1/16<sup>th</sup> of an inch keeping the speed at 10 mph and the load at the 365 lbs, max rated level.

#### The results of these final four tires

#### Tube-type

**Slime Tire-0005:** Sealed at 1/8" and 3/16", but would not seal at 5/16" at 33 minutes.

**Accella Reseal Tire-0011:** Sealed at 1/8", 3/16", ¼", 5/16", 3/8", 7/16", but would not seal at ½" inch at 93 minutes.

#### Tubeless

Slime Tire-0008: Sealed at  $\frac{1}{2}$ ", 5/16", 3/8", 7/16" and once at  $\frac{1}{2}$ " inch but failed at second  $\frac{1}{2}$ " inch puncture at 78 minutes.

Accella Reseal Tire-0014: Sealed at ¼", 5/16", 3/8", 7/16", ½" inch twice but failed on the third puncture at 93 minutes.

# **CORROSION, RUST, AND ALGAE TESTING**

A side by side comparison of the two products was done using ASTM test procedure using 0000 steel wool pads half immersed in the two liquid products. Top of each pad and liquid was exposed to the same laboratory atmosphere (temperature and humidity) for 21 days.

Results show corrosion, rust and algae forming on the pads and on the surface of the Slime liquid with nothing present on the Accella Reseal.



Tires that were tested will be dismounted and further examination will be made to look for similar results on the inside of the steel wheels.

## **DYNAMOMETER**

The final two tires – Tubeless 0008 and 0014 with Slime and Accella Reseal are shown giving fairly graphic views of the mounting and the 67 inch wheel. Calibrations are made on the machine's load and speed on a routine basis, and the same machine was used on all test specimens.



# **SUMMARY**

The test objective was to prove which liquid sealant is superior. "As good as or better than" was our objective and we feel that we have demonstrated that with this test. Arnco Reseal is superior.

Support Data for all twelve tires is available and can accompany this document. This data is provided by Standard Testing Labs, which is an Independent test facility.

Respectfully Submitted by,

Bob Rose- Senior Accella Consulting Chemist May 28<sup>th</sup>, 2011