TECHNICAL REPORT Prepared for: Infinity Tyre Seal
Berkeley Square House
Berkeley Square
Mayfair, London
W1J 68D

Technical Report Prepared by:

B. J. Lawton Newlaw Associates Limited
3 Alderney Close Newcastle
Staffs ST5 3PW
United Kingdom
Telephone: +44 (0)1782 612164
E-Mail: newlawtyre@aol.com
Mobile: 07802 734940
Our Reference: B/SSL
Date: 2nd October 2020

PRODUCT CONFORMITY: Infinity Tyre Seal, puncture prevention and tyre life extender test

Introduction:

Instructions were received from the Management of Infinity Tyre Seal to conduct independent testing and appraisal of the Infinity Tyre Seal product.

Objectives:

1. To evaluate the Infinity Tyre Seal product as an effective ‘puncture prevention treatment’ by drum testing a tyre with three penetration damages at maximum load and speed in accordance with ECE Regulation 30.

2. To comment on the Infinity Tyre Seal product as an effective ‘tyre life extender’

Testing:

Tests were conducted at the Smithers/RAPRA Testing Laboratory, Shawbury.

The schedule adopted for the purpose of testing was ECE Regulation 30 Type approval.

ECE Regulation 30 is a load/speed performance test simulation of a tyre under load running on the road. The test consists of an inflated tyre and wheel assembly, mounted on a free running axle, with the tyre pressed against a power driven 1.7 metre diameter rotating drum. Through the axle a force relating to the particular tyre’s operating load is applied to the drum which is then rotated at varying speeds for specific periods of time. The test drum is able to conduct the testing of two tyres simultaneously – one mounted on the left station and one mounted on the right station.

TEST 1:

To test and assess the Infinity Tyre Seal product as an effective ‘puncture prevention treatment’.

Tyre Details:

Size & Type: 205/55 R16 Goodyear Efficientgrip Tubeless Radial

Service description: 91V – Maximum Load Index = 615kg. -
Maximum Speed Rating – 150mph.

Date of manufacture – 3419 (Week 34, 2019)

The above inflated new tyre containing the recommended amount of Infinity Tyre Seal product was mounted on the test drum.

The inflated tyre had previously been penetrated in three areas - the centre tread and both shoulder areas. The penetrations, (spaced at approximately 120 degrees apart), were effected using a 6mm diameter nail which was hammer-driven through the tyre and removed. A loss of inflation pressure occurred at the three points of penetration. The tyre was then hand rotated through 360 degrees to allow the Infinity Tyre Seal product to flow around the inner tubeless lining and immediately seal the three penetrated areas. There was no further loss of inflation pressure.

The tyres were then subjected to ECE Regulation 30 (Type-approval), 1 hour high speed test schedule appropriate to the tyre’s service description. (91V).

10 minutes to 200kmh (124mph)
10 minutes at 200kmh (124mph)
10 minutes at 210kmh (130mph)
10 minutes at 220kmh (137mp h)
20 minutes at 230kmh (143mph)

Conclusion:

The tyre completed the intended test schedule. Each area of penetration damage was examined carefully – there was no evidence of pressure loss.

TEST 2:

To test and assess the Infinity Tyre Seal product as a ‘tyre life extender’

Two new tyres of the same make; size, type and date of manufacture were fitted to the left and right positions of the test drum. One of the tyres contained the recommended amount of Infinity Tyre Seal product.

Both tyres were then subjected to ECE Regulation 30 (Type-approval), 1 hour drum-test schedule appropriate to the tyre’s service description.

On completion of the test schedule, temperature readings were taken at 6 points on the tread surface of each tyre:

Average temperature of tyre with Infinity Tyre Seal = 47.83 degrees Centigrade.

Average temperature of tyre without Infinity Tyre Seal = 50.66 degrees Centigrade.

Conclusion:

The tyre fitted with Infinity Tyre Seal ran 5.58% cooler.

SUMMARY:

1. The Infinity Tyre Seal product was found to be an effective puncture prevention treatment.

2. The tyre installed with Infinity Tyre Seal was found to be a cooler running tyre.

The series of conducted tests provided substantial evidence that the Infinity Tyre Seal product can perform as an effective ‘puncture prevention treatment and as a ‘tyre life extender’.

In accordance with ECE Regulation 30, the use of Infinity Tyre Seal as an effective puncture prevention treatment against three 6mm diameter-penetrating objects was confirmed at the highest load index and speed rating of the tested tyre.

Comparative testing of two tyres served to demonstrate that the tyre treated with Infinity Tyre Seal ran cooler than the untreated tyre.

Throughout the life of a tyre, the effect of maintaining correct inflation pressure at lower operating temperatures serves to optimise rolling resistance – thereby increasing mileage and reducing fuel consump

B J Lawton Newlaw
Associates Limited

2nd October 2020