

TECHNICAL REPORT

Prepared for:

**PUNCTURESAFE UK
Unit 4 Clyst Court
Hill Barton Business Park
Clyst St Mary
Exeter
EX5 1SA**

PRODUCT CONFORMITY TESTING:

**PUNCTURE PREVENTION TREATMENT
& TYRE LIFE EXTENDER**

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: PUNCTURES SAFE PREVENTION TREATMENT & TYRE LIFE EXTENDER

Introduction

Instructions were received from the Management of Puncturesafe UK to conduct independent testing and appraisal of the Puncturesafe product.

Objectives:

- 1. To evaluate the Puncturesafe 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 Puncturesafe 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 Puncturesafe product as an effective ‘puncture prevention treatment’.

Tyre Details:

Size & Type: 205/55R 16 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 Puncturesafe 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 Puncturesafe 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 whatever of pressure loss.

TEST 2:

To test and assess the Puncturesafe 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 Puncturesafe 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 Puncturesafe = 47.83 degrees Centigrade.

Average temperature of tyre without Puncturesafe = 50.66 degrees Centigrade.

Conclusion:

The tyre fitted with Puncturesafe ran 5.58% cooler.

SUMMARY:

- 1. The Puncturesafe product was found to be an effective puncture prevention treatment.**
- 2. The tyre fitted with Puncturesafe was found to be a cooler running tyre.**

The series of conducted tests provided substantial evidence that the Puncturesafe product can perform as an effective 'puncture prevention treatment and as a 'tyre life extender'.

In accordance with ECE Regulation 30, the use of Puncturesafe 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 Puncturesafe 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 consumption.

A handwritten signature in black ink, appearing to read 'B J Lawton', is positioned above the typed name.

B J Lawton
Newlaw Associates Limited

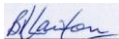
2nd October 2020

PUNCTURESAFE
TYRESEALANT

CERTIFICATE OF CONFORMANCE

This is to certify that the tyre detailed below containing Puncturesafe was successfully drum-tested to appropriate load and speed rating in accordance with the requirements of ECE Regulation 30

205/55R 16 Goodyear Efficientgrip
Tubeless Radial



Newlaw Associates

1st October 2020

Date

140061

Certificate Number