



**HIGHWAY ENGINEERING RESEARCH GROUP**

University of Ulster  
School of the Built Environment  
Newtownabbey,  
County Antrim  
Northern Ireland  
BT37 9QB  
Tel: 028 9036 8709

**HERG Report: 17576**

**Prepared for: For the attention of Adrian Wilson  
122-130 Duncrue Street  
Belfast  
BT3 9AQ**

**Report on: Skid resistance recovery after Nanobite Oil Blitz application to road surface asphalt**

This report summarises a laboratory assessment of wet skid resistance recovery after application of Nanobite Oil Blitz to asphalt road surfacing materials that had been sprayed with petrol / diesel.

The testing was carried out on 19<sup>th</sup> August 2017 by Dr David Woodward BSc Hons, MPhil, DPhil, MCIHT, MIAT, MIQ, MIEI, Ulster University.

The investigation was requested by Adrian Wilson.

Three asphalt slabs were assessed. These were 305 x 305 x 50 mm in size and had been compacted using a roller compactor. Two were 10 mm Thin Surface Course System (TSCS) asphalt made with a PSV 65 greywacke aggregate and polymer modified bitumen (pmb). The third was a 6 mm TSCS also made with PSV 65 greywacke aggregate and polymer modified bitumen.

The two 10 mm TSCS test specimens had been subjected to simulated trafficking using the Road Test Machine located at Ulster University. The amount of trafficking was indicative of a TSCS during its early life with there still being a significant amount of pmb still present at the trafficked surface.

The 6 mm TSCS had received considerable trafficking with the coarse aggregate being highly polished.

The dry and wet skid resistance of each test specimen was assessed using a pendulum tester in accordance with BS EN 13036-4:2011.

Diesel / petrol was sprayed onto the slab surface. An equal amount of Nanobite Oil Blitz was sprayed onto the diesel / petrol and left for 15 minutes.

The slab surface was washed using water and its wet skid resistance determined. A summary of the pendulum data is shown below.

Slab details	Petrol / diesel	Dry PTV	Wet PTV	Wet PTV after washing Nanobite Oil Blitz off the surface	Wet skid resistance recovery (%)
10 mm TSCS	Petrol	84	48	43	<b>90</b>
10 mm TSCS	Diesel	85	43	42	<b>97</b>
6 mm TSCS	Petrol	93	34	30	<b>88</b>

The pendulum data shows how wet skid resistance has recovered after an equal amount of Nanobite Oil Blitz has been applied to the petrol and / or diesel on the 10 mm / 6 mm TSCS test specimens.

This laboratory investigation has found the wet skid resistance of the slabs to recover 88% to 97 % of their original wet skid resistance after 15 minutes.

If you require further details please do not hesitate to contact me.

*David Woodward*

Dr David Woodward BSc Hons, MPhil, DPhil, MCIHT, MIAT, MIQ, MIEI.