



## SERVICES

# SKID RESISTANCE TESTING

### **New solutions for your pavement assets**

Surface friction of pavements has and always will be of extreme importance in evaluating the safety of a pavement. The FHWA (USA) reported that of over 25 million accidents, 19% occurred on wet pavements. For this reason it is imperative for public safety that pavement managers undertake surface friction surveys on a routine and regular basis.

#### **High Speed Road Condition and Asset Inventory Surveys**

Risk assessment is becoming increasingly popular in the field of pavement engineering; this is primarily due to the role of the pavement manager essentially being a risk manager, whether this is in assessing the probability for premature pavement failure or in the assessment of potential for accidents due to the skid resistance properties of the pavement surface. Pavement managers can never eliminate the risk of failure or the risk to the public. The best that can be done is to manage, understand and reduce risk.

## SKID RESISTANCE TESTING



### Overview of Skid Resistance

Skid resistance is the force / friction developed when a tyre that is prevented from rotating slides along the pavement surface. It is at its lowest when affected by water, mud or loose detritus resulting from the day to day usage of the road network. Skid resistance measurement is an important safety factor - inadequate skid resistance will lead to higher incidences of skid related accidents.

The factors that can influence the level of surface friction include:

- Vehicle speed and surface texture
- Water depth and tyre characteristics
- Seasonal, year-on-year and regional variations
- Temperature
- Road geometry
- Surface contamination
- Surfacing aggregates
- Surfacing type and age (early life skid resistance)

### Texture

Pavement texture has a major effect on tyre/road noise emission, tyre/road friction, rolling resistance, tyre wear and other vehicle user costs. In conjunction with skid resistance testing, Pavement Management Services also offer Texture testing. Texture is collected using a laser profilometry system which offers the ability to collect pavement texture depth in the surface by both mean profile depth (MPD) and Equivalent Sand Patch diameter.

### Griptester

GripTester is the world's leading trailer based continuous surface friction measuring device used by airports and highways around the globe. The GripTester is a highly reliable instrument for investigating accident sites, problem areas, and for predicting the safety of pavement surfaces.



### Norsemeter ROAK MK-II

Norsemeter ROAK MK-II is a trailer equipped with the ROAK friction measuring unit, which has a special high precision hydraulic brake machine with a standard ASTM 1551 test tyre (diameter 40 cm / 16 in). The equipment can be operated in all travel speeds with measurement able to take place above 30 km/h. The ROAK MK-II owned and operated by Pavement Management Services was calibrated against a SCRIM device as part of the Transit New Zealand validation study in 2010, which is a requirement for the reporting of equivalent SFC50.