

English Version

Road and airfield surface characteristics - Part 10: Procedure for determining the skid resistance of a pavement surface using a device with longitudinal block measurement (LFCSK): the Skiddometer BV-8

Caractéristiques de surface des routes et aéroports - Partie 10 : Mode opératoire de détermination de l'adhérence d'un revêtement de chaussée à l'aide d'un dispositif à mesurage longitudinal, roue bloquée (CFLSK): le skiddomètre BV-8

Oberflächeneigenschaften von Straßen und Flugplätzen - Teil 10: Verfahren zur Bestimmung der Griffigkeit von Fahrbahndecken durch Messung des Reibungskoeffizienten (LKCSK) am blockierten Schlepprad: das Skiddometer BV-8

This Technical Specification (CEN/TS) was approved by CEN on 27 June 2009 for provisional application.

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Contents

Page

Foreword.....	3
1 Scope	4
2 Recommended uses	4
3 Terms and definitions	4
4 Safety	6
5 Principle	6
5.1 Principle of measurements	6
5.2 Operating principle	7
6 Key characteristics	7
6.1 General	7
6.2 Test equipment	7
6.3 Test wheel assembly	8
6.4 Test tyre	8
6.5 Water supply and flow control	8
6.6 Parameters recorded	8
7 Test procedure	8
7.1 Standard test conditions	8
7.2 Prior to testing	9
7.3 Testing	9
8 Data Recording	9
9 Calibration	10
10 Accuracy	10
11 Test report	10
Bibliography	12

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Foreword

This document (CEN/TS 15901-10:2009) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

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1 Scope

This Technical Specification describes a method for determining the skid resistance of paved surface by measurement of the longitudinal friction coefficient μ_{Skid} .

The method provides a measure of the wet skid resistance properties of a bound surface by measurement of the longitudinal friction coefficient using a locked wheel with a slip ratio of 0 % (locked wheel: standard), or a slip ratio of (14 ± 1) % and a controlled speed. The test tyre is dragged over a pre-wetted pavement under controlled load and constant speed conditions while the test tyre is parallel to the direction of motion and to the pavement.

This Technical Specification covers the operation of the Skiddometer, Type BV 8, used in Switzerland.

2 Recommended uses

This method provides a means for the evaluation of the skid resistance of a road surface. It is suitable for use in the following situations:

- measurement of road in service, either network monitoring for Pavement Management, or measurements on project-level;
- approval of new or renewed pavements;
- research measurements;
- special measurements with separately defined measuring method in winter conditions (ice, snow, frost).

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 friction

resistance to relative motion between two bodies in contact, the frictional force being the force which acts tangentially in the contact area

3.2 skid resistance

characterisation of the friction of a road surface when measured in accordance with a standardised method

3.3 wet road skid resistance

property of a trafficked surface that limits relative movement between the surface and the part of a vehicle tyre in contact with the surface, when lubricated with a film of water

NOTE Factors that contribute to skid resistance include the tyre pressure, contact area, tread pattern, and rubber composition; the alignment, texture, surface contamination, and characteristics of the road surface; the vehicle speed; and the weather conditions.

The skid resistance of a road surface in Europe varies seasonally. Generally, wet skid resistance is higher in winter as a result of the effects of wet detritus and the effects of frost and wear by tyres on microtexture and macrotexture. Wet skid resistance is lower in summer as a result of dry polishing by tyres in the presence of fine detritus.

The change in skid resistance of a surface in service is affected by the volume of traffic and the composition of the traffic, i.e. cars, buses, commercial vehicles of different sizes, as the tyres of these vehicles polish and/or wear away the