



BSI Standards Publication

Road and airfield surface characteristics

Part 6: Procedure for determining the skid resistance of a pavement surface
by measurement of the sideways force coefficient (SFCS) — SCRIM®

National foreword

This British Standard is the UK implementation of CEN/TS 15901-6:2009. It supersedes BS 7941-1:2006, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/510/5, Surface characteristics.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2009
Published by BSI Standards Limited 2009

ISBN 978 0 539 21969 2

ICS 93.080.20; 93.120

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2009.

Amendments/corrigenda issued since publication

Date	Text affected
31 May 2022	Correction to supersession details in national foreword

TECHNICAL SPECIFICATION
 SPÉCIFICATION TECHNIQUE
 TECHNISCHE SPEZIFIKATION

CEN/TS 15901-6

November 2009

ICS 93.080.20

English Version

Road and airfield surface characteristics - Part 6: Procedure for
 determining the skid resistance of a pavement surface by
 measurement of the sideway force coefficient (SFCS): SCRIM(r)

Caractéristiques de surface des routes et aéroports - Partie
 6: Mode opératoire de détermination de l'adhérence d'un
 revêtement de chaussée en procédant au mesurage du
 coefficient de frottement transversal (CFTS): le SCRIM

Oberflächeneigenschaften von Straßen und Flugplätzen -
 Teil 6: Verfahren zur Bestimmung der Griffigkeit von
 Fahrbahndecken durch Messung des
 Seitenreibungsbeiwerts (SFCS): das SCRIM-
 Griffigkeitsmessgerät

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

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
 COMITÉ EUROPÉEN DE NORMALISATION
 EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Recommended uses	4
4 Terms and definitions	4
5 Safety	7
6 Essential characteristics.....	7
6.1 Principle of measurements.....	7
6.2 Operating Principle.....	7
7 Key Characteristics	8
7.1 General.....	8
7.2 Test equipment	8
7.3 Test wheel assembly	9
7.4 Test tyre	9
7.5 Pavement wetting system, water film thickness	9
7.6 Measurement control system and recorder.....	10
7.7 Parameters recorded	10
8 Test procedure	10
8.1 Standard test conditions.....	10
8.2 Prior to testing	11
8.3 Testing	11
9 Data recording.....	12
10 Calibration	12
10.1 General.....	12
10.2 Static calibration of horizontal load measurement	12
10.3 Static calibration of vertical load measurement.....	13
10.4 Vertical load recording static check	13
10.5 Vertical load static check.....	14
10.6 Dynamic calibration check	14
10.6.1 General.....	14
10.6.2 General.....	14
10.6.3 Operational procedures for dynamic comparison checks.....	15
10.7 Distance calibration.....	15
11 Precision	15
12 Test Report	15
Bibliography	17

Foreword

This document (CEN/TS 15901-6:2009) has been prepared by Technical Committee CEN/TC 227 "Road materials", the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Technical Specification describes a method for determining the wet-road skid resistance of a surface by measurement of the sideway force coefficient SFCS.

The method provides a measure of the wet-road skid resistance properties of a bound surface by measurement of sideway-force coefficient at a controlled speed. The method has been developed for use on roads but is also applicable to other paved areas such as airport runways.

This Technical Specification covers the operation of the Sideway-force Coefficient Routine Investigation Machine SCRIM®. This is a device developed by W.D.M. Limited, Bristol, England from original research by the Transport Research Laboratory in the United Kingdom. It uses the side force principle to make routine measurements of skid resistance continuously on long lengths of road. SCRIM test equipment has been built onto a number of different vehicle chassis and functions independently of vehicle choice.

A machine conforming to the general characteristics of the SCRIM and the specific provisions of this Technical Specification may also be used for the tests.

The skid resistance of a pavement is determined by friction measurements and measurements of pavement texture. Where measurement of pavement texture is required the standard for this measurement and the device is described in EN ISO 13473-1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 48, *Rubber, vulcanized or thermoplastic – Determination of hardness (hardness between 10 IRHD and 100 IRHD)*

ISO 4662, *Rubber – Determination of rebound resilience of vulcanizates*

3 Recommended uses

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

- testing new surfacing materials when installed in a road trial for Type Approval purposes;
- testing new surfacing materials for contractual compliance purposes;
- routine determination of the in-service skid resistance of the surface of a road or airport runway;
- research.

4 Terms and definitions

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

4.1

friction

resistance to relative motion between two bodies in contact

NOTE The frictional force is the force which acts tangentially in the contact area.