



**SLOVENSKI STANDARD**  
**SIST EN 13197:2011/kFprA1:2013**  
**01-november-2013**

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**Materiali za označevanje vozišča - Vrtljiva plošča za simulacijo obrabe**

Road marking materials - Wear simulator Turntable

Straßenmarkierungsmaterialien - Verschleißsimulator

Produits de marquage routier - Simulateurs d'usure tournant

**Ta slovenski standard je istoveten z: EN 13197:2011/FprA1**

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**ICS:**

93.080.20      Materiali za gradnjo cest      Road construction materials

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ICS

English Version

## Road marking materials - Wear simulator Turntable

Produits de marquage routier - Simulateurs d'usure  
tournant

Straßenmarkierungsmaterialien - Verschleißsimulator

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 226.

This draft amendment A1, if approved, will modify the European Standard EN 13197:2011. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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## EN 13197:2011/FprA1:2013 (E)

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## Foreword

This document (EN 13197:2011/FprA1:2013) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

This document is currently submitted to the UAP.

**EN 13197:2011/FprA1:2013 (E)****1 Modification to Clause 2 Normative references**

*Replace the first paragraph with the following one:*

" The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. "

**2 Modification to 4.6.3 Type of tyres**

*Delete the 2<sup>nd</sup> dash in NOTE 1.*

**3 Modification to 4.6.6 Steering and support angles**

*Replace the first paragraph with the following one:*

" The fixation system of the wheels has to allow the adjustment of the steering angle with a tolerance of  $\pm 10'$  and the support angle with a tolerance of maximum  $\pm 1^\circ$ . "

**4 Modification to 7.5 Conditioning**

*Add in the 2<sup>nd</sup> paragraph, first line, the word solvent so that it appears as follows:*

" Test operation for solvent paints will commence eight days, at the earliest, and twelve days, at the latest, following the application of test samples. The conditioning periode for water-based paints shall be one week more than solvent paints. For other products the minimum conditioning period is 48 h. "

## 5 Modification to 8.2.2 General test conditions

Replace in Table 3.1, 5<sup>th</sup> row, 2<sup>nd</sup> column, "-20'" with " $\pm 1^\circ$ " so that it appears as follows:

**Table 3.1 – General test conditions on the wear simulator**

Number of wheels	4*)
Type of Tyres	Approved commercial tyres in accordance to 4.6.3. New tyres for each test
Tyre pressure (Mpa)	0,25 $\pm$ 0,02
Load per wheel (N)	3.000 $\pm$ 300
Support angle (degrees)	0° with a maximum deviation of $\pm 1^\circ$
Steering angle (degrees)	Alternating each wheel + 1° ( $\pm 10'$ ) / -1° ( $\pm 10'$ )
Linear speed (km/h)	15 km/h $\pm$ 1 km/h when wet and 60 km/h $\pm$ 3 km/h when dry
Turn direction	50 % in each direction
Periodicity of measurements	0; 0,01; 0,05 (optional); 0,1; 0,2; 0,5; 1,0; 2,0; 3,0 and 4,0 x 10 <sup>6</sup>
Room temperature	between 5 °C and 10 °C
*) Different number of wheels can be used, provided that they correlate with the results obtain with the reference stress load in 4.6.2.	

## 6 Modification to 8.5.1 Measuring parameters

Delete the last dash concerning the wear index from the list of relevant parameters so that the paragraph appears as follows:

" Measurements shall be taken in accordance with EN 1436, for the relevant parameters:

- Coefficient of retro reflected luminance  $R_L$  dry;
- Coefficient of retro reflected luminance  $R_L$  wet either;
- Coefficient of retro reflected luminance  $R_L$  during rain;
- Luminance coefficient in diffuse illumination  $Q_d$  either;
- Luminance factor  $\beta$ ;
- Chromaticity coordinates (x, y);
- Skid resistance SRT-Units. "

## 7 Modification to 8.5.2 Number of measurements in the measurement areas

Replace in the 3<sup>rd</sup> paragraph "800 cm<sup>2</sup>" with "400 cm<sup>2</sup>".

" For the coefficient of retro reflected luminance  $R_L$  (dry, wet or/and during rain) and the coefficient of retro reflected luminance in diffuse illumination  $Q_d$  use a number of measuring locations to provide a total minimum measured surface area of 400 cm<sup>2</sup>. "

## 8 Addition of a new subclause 8.5.4 Optional measuring parameters

*Add the following new subclause after 8.5.3*

### " 8.5.4 Optional measuring parameters

The following parameters to be measured are optional:

- percentage of coverage;
- percentage of wear.

The percentage of coverage might be useful to determine the percentage of coverage for structured road markings which do not have a fully and flat surface.

The percentage of wear gives information on the resistance to wear after a defined number of wheel passages. The percentage of wear is defined as the relation of the remaining road marking on the surface to the road marking in the original condition.

For the determination of the percentage of coverage and the percentage of wear, a system based on a photo of the road marking on which a frame is superimposed can be used. Afterwards an image processing technique can be employed. The frame shall be at least as big as the area which is subject to wheel passages. The photo shall be made perpendicular to the road marking. "