SLOVENSKI STANDARD
SIST EN 15518-2:2011

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Oprema za zimska vzdrževalna dela - Cestni vremensko-informacijski sistemi - 2. del: Vremenske razmere na cestah - Priporočena opazovanja in napovedi

Winter maintenance equipment - Road weather information systems - Part 2: Road weather - Recommended observation and forecast

Winterdienstausrüstung - Straßenzustands- und Wetterinformationssysteme - Teil 2: Straßenwetter - Empfohlene Beobachtung und Vorhersage

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Matériels de viabilité hivernale - Systèmes d'information météorologique routière - Partie 2: Météorologie routière - Observations et prévisions recommandées

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Ta slovenski standard je istoveten z: **EN 15518-2:2011**

ICS:

07.060	Geologija. Meteorologija. Hidrologija	Geology. Meteorology. Hydrology
13.030.40	Naprave in oprema za odstranjevanje in obdelavo odpadkov	Installations and equipment for waste disposal and treatment
35.240.99	Uporabniške rešitve IT na drugih področjih	IT applications in other fields

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Winter maintenance equipment - Road weather information systems - Part 2: Road weather - Recommended observation and forecast

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Foreword

This document (EN 15518-2:2011) has been prepared by Technical Committee CEN/TC 337 “Winter maintenance and road service area maintenance equipment”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2011, and conflicting national standards shall be withdrawn at the latest by August 2011.

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.

EN 15518, *Winter maintenance equipment — Road weather information systems*, comprises of the following parts:

— *Part 1: Global definitions and components*

— *Part 2: Road weather — Recommended observation and forecast*

— *Part 3: Requirements on measured values of stationary equipments*

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Introduction

Road Weather Information Systems (RWIS) are complex structures used for road maintenance decision support, which feature as a rule the following components: meteorological sensors and instruments, transmission technology, computer systems for processing, representation and storing of information, road weather forecasts and alarms, in relation to traffic control and traffic information systems and more.

Road weather observation and forecast are a set of road and atmospheric parameters and data used by the road maintenance services to determine future road conditions.

This part of EN 15518 lays down the requirements for the recommended road weather observation and forecast information of a RWIS.

The aim is to ensure extensive combination and interchangeability within the systems.

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1 Scope

This European Standard specifies the frequency, resolution and content of road weather observation and forecast products for a Road Weather Information Systems (RWIS).

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.

Not applicable.

3 Requirements on the content of road weather observation and forecast products

Road weather is characterized by weather phenomena and meteorological parameters which affect the road surface conditions. A distinction has to be made between observation and forecast.

The RWIS-forecasts shall provide the necessary information for maintenance agents to:

— make a short-term (up to 4 h) and a long-term (up to one week) planning for the disposition of personnel and means;

— decide on immediate interventions.

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It has to be considered that the geographical accuracy is indirectly proportional to the forecast period. Therefore a forecast for seven days covers a larger area than a short-term forecast for the next few hours.

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Road weather observation and forecasts describe conditions which would occur without winter maintenance interventions. They do not take into account the influences from traffic.

The forecast provider discloses the scientific basis, the accuracy and the database of the products to the customer.

The forecast products which are recommended are shown in Table 1.

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Table 1 — Weather forecast products

Forecast product	Frequency	Resolution	Content
long-term forecast from the 4th up to the 7th day	once a day without amendment	— days; — regions of about 100 km × 100 km.	general weather conditions for daytime and night-time
medium-term forecast up to the 3rd day	twice a day	— days; — regions of about 100 km × 100 km.	a) general weather conditions for daytime and night-time; b) details of road weather parameters such as: 1) general synopsis with time; 2) minimum air temperature; 3) minimum pavement surface temperature; 4) time of zero crossing; 5) likelihood and time of precipitation or deposition on road surface; 6) wind direction and speed; 7) gusts of wind; 8) snow drift; 9) probability of occurrence.
short-term-forecast for 24 h in tabular form	twice a day, if necessary with amendment [a]	— in 3 h to 4 h intervals; — for small areas with similar climatological properties; — for each 200 m to 400 m altitude-levels.	— air temperature; — pavement temperature; — total cloud cover; — precipitation; — wind direction and speed; — road surface conditions for different site characteristics in the region (motorways, low traffic roads, bridges, shadowy stretches, cities).
Radar images and extrapolations for the next 2 h	every 5 min to 15 min	charts, one pixel for max 2 km × 2 km area	— real time images of the last 2 h; — two-hour extrapolation of the actual precipitation areas; — distinction between liquid and solid precipitation.

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Table 1 *(continued)*

Forecast product	Frequency	Resolution	Content
warnings	as soon as possible before the event	area will depend on event	description of events affecting road weather conditions (freezing rain) (large snow/rain falls) (high wind speeds) affected area and anticipated duration
consultation with forecast provider	on demand	on demand	on demand
satellite pictures [b]	at least 30 min	depending on satellite location	visible and infrared picture

[a] The 24-h-forecast shall be amended if significant new developments occur in the following parameters:
- precipitation;
- frost yes/no;
- road slipperiness;
- time shift of more than 3 h;
- fresh snow more than 5 cm.

[b] Satellite pictures are not part of the weather forecast tools, but can be used as a complementary information.

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