

Winter maintenance equipment - Spreading and spraying machines - Part 2: Requirements for distribution and their test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15597-2:2019 sisaldab Euroopa standardi EN 15597-2:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 15597-2:2019 consists of the English text of the European standard EN 15597-2:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 04.12.2019.	Date of Availability of the European standard is 04.12.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.030.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Winter maintenance equipment - Spreading and spraying
machines - Part 2: Requirements for distribution and their
test

Équipement de viabilité hivernale - Épanduses -
Partie 2 : Prescriptions relatives à la distribution et
essai

Winterdienstausrüstung - Streumaschinen - Teil 2:
Anforderungen an die Streustoffverteilung und deren
Prüfung

This European Standard was approved by CEN on 2 September 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Definition	8
5 Test materials.....	8
6 Certification procedure.....	9
6.1 Principle of qualification procedure.....	9
6.2 Identification and requirements on spreader types	9
6.3 Procedure of the static test.....	10
6.4 Dynamic test procedure.....	14
Annex A (normative) Components which have an influence on the spreading parameters.....	22
Annex B (normative) Example of a partially filled form for a test report	23
Bibliography.....	29

European foreword

This document (EN 15597-2:2019) has been prepared by Technical Committee CEN/TC 337 "Road operation equipment and products", 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 June 2020, and conflicting national standards shall be withdrawn at the latest by June 2020.

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

This document supersedes CEN/TS 15597-2:2012, which has been technically revised. The main following changes were introduced:

- update of the normative references and of the Bibliography;
- deletion of Table 1 and Table 2 (defined working ranges of the different types of machinery) for spreader type definition, this is reported in EN 15597-1;
- inclusion of the determination and characteristics of test materials for salt 1 and salt 2 (Clause 5);
- addition of a new test for the starting behavior;
- simplification of the static tests;
- modification of Figure 1 to Figure 4 and deletion of Figures 5 to 8;
- adaptation of the test points to the changes in the working ranges of the spreader types;
- inclusion of Annex B as an example for a static test report.

EN 15597, *Winter maintenance equipment - Spreading and spraying machines*, is composed of the following parts:

- *Part 1: General requirements and definitions;*
- *Part 2: Requirements for distribution and their test.*

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is meant to assess the demands made on mobile spreading and spraying machines operated in traffic.

For simplicity, in this document all machines are called “spreaders” also for liquid agent spraying.

Spreading machines (spreaders/gritters) are meant to be operated in such way that homogeneous distribution of spreading media is given within the set spreading dosage, width and spreading pattern track.

The static and dynamic test procedure has the task to test functionality and accuracy of the spreader. With dynamic testing, the task is also to test the spreading pattern as much as possible under real conditions. Therefore, the dynamic test is done with trucks driving realistic speeds.

To ensure the repeatability of the results and to limit the expenditure, the tests for the certification are not done with all possible spreading agents and all possible parameters of the operational area of the spreader. The salt for the test is limited to three defined test materials, also the brine is defined (see Clause 5), and the dynamic tests are not done with the highest possible driving speeds. This does not mean that the spreaders do not work with other materials or higher speeds. If the spreader is bound to operate with other materials and/or higher speed, this is meant to be tested and adjusted individually by the customer. Especially when driving at higher speeds, the influences of the driving turbulences and the truck configuration upon which the spreader is mounted become very strong so that it makes no sense to test this for the certification independent of the special truck.

1 Scope

This document gives the possibility to certify a model of vehicle-mounted or (trailer) dragged spreading machines for winter service with standard parameters, leaving the possibility to the manufacturer to evolve in performances. At the same time, information is given on the minimum content required for operating manuals.

This document is valid for machines which are used to spread the following media:

- not pre-wetted spreading agent (solid spreading agent);
- pre-wetted spreading agent;
- liquid spreading agent (brine).

The following points are not covered by this document:

- requirements for registration and approval;
- requirements made by automobile manufacturers;
- requirements on EN 15518-3.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 15144, *Winter maintenance equipment — Terminology — Terms for winter maintenance*

EN 15431, *Winter and road service area maintenance equipments — Power system and related controls — Interchangeability and performance requirements*

EN 15597-1:2019, *Winter maintenance equipment — Spreading machines (gritting machines) — Part 1: General requirements and definitions for spreading machines*

EN ISO 13473-1, *Characterization of pavement texture by use of surface profiles — Part 1: Determination of mean profile depth (ISO 13473-1)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15144 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

machine model

machine model that includes a spreader of thawing media for road maintenance and its control box.