

**Winter maintenance equipment - Spreading machines
(gritting machines) - Part 1: General requirements and
definitions for spreading machines**

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 15597-1:2009 sisaldab Euroopa standardi EN 15597-1:2009 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 31.12.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 28.10.2009.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 15597-1:2009 consists of the English text of the European standard EN 15597-1:2009.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 28.10.2009.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

ICS 13.030.40

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

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

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian 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 permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

ICS 13.030.40

English Version

Winter maintenance equipment - Spreading machines (gritting machines) - Part 1: General requirements and definitions for spreading machines

Équipement de viabilité hivernale - Épanduses - Partie 1 :
Exigences générales et définitions relatives aux
épanduses

Winterdiensttausrüstung - Streumaschinen - Teil 1:
Allgemeine Anforderungen und Angaben für
Streumaschinen

This European Standard was approved by CEN on 29 September 2009.

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 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 Management Centre has the same status as the official versions.

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.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Requirements	7
4.1 General	7
4.2 Requirements on dosage of spreading agents	8
4.3 Technical information	8
4.4 Requirements on drives for spreading machines	10
4.4.1 Drive by hydraulic unit of carrier vehicle	10
4.4.2 Drive by hinged wheel and carrier vehicle wheel-hub drive	10
4.5 Design requirements	10
4.5.1 Spreading device	10
4.5.2 Equipment for spreading agent pre-wetted	11
4.5.3 Stationary emptying	11
4.6 Operation and control system	12
4.6.1 Operating voltage	12
4.6.2 Degree of protection	12
4.6.3 Control related spreading	12
4.6.4 Adjustment steps	12
4.6.5 Control box	12
4.6.6 Control box alarms	12
4.6.7 Selection of spreading agent	13
4.6.8 Data recording	13
4.6.9 Emergency operation	13
4.6.10 Spreading in specific areas	13
5 Operating manual	13
ANNEX A (normative) Static test method to check spreading dosage performances	14
A.1 Short description	14
A.2 Applicable spreading agents	14
A.3 Technical means for testing	14
A.4 Testing procedures	14
ANNEX B (normative) Automatic safety shut-off loading brine pump	16
ANNEX C (informative) Pre-wetted salt	18
C.1 Visualization: Mass fractions of the system pre-wetted salt	18
C.2 Visualization: Three systems for pre-wetted salt, examples with setting 20 g/m² at the spreader control unit mass salt in brine is 23 %	18
Tables	
Table 1 — Solid and pre-wetted thawing agent	7
Table 2 — Abrasive spreading agent	7
Table 3 — Liquid thawing spreading agent	7
Table 4 — Requirements on dosage of spreading agents	8

Figures

Figure 1 — Dimensions of spreading machines (G quote centre of gravity).....	9
Figure 2 — Spreading device	11
Figure B.1 — Type connector.....	16
Figure B.2 — Schematic diagram spreader/loading brine plant.....	17
Figure C.1 — Visualization mass fractions.....	18
Figure C.2 — System 1.....	18
Figure C.3 — System 2.....	19
Figure C.4 — System 3.....	19

Foreword

This document (EN 15597-1:2009) 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 April 2010, and conflicting national standards shall be withdrawn at the latest by April 2010.

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 implement this European Standard: 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.

Introduction

This document is meant to assess the demands made on mobile spreading machines operated in traffic. Spreaders/gritters are to be operated in such way that homogeneous distribution of spreading agents is given within the set spreading dosage, spreading width and spreading track asymmetry.

This document is a preview generated by EVS

1 Scope

Demands on design and construction of bulk spreaders, trailer spreaders and towed spreaders with speed related spreading for winter service are determined by this document. At the same time, information is given on the minimum content required for operating manuals.

The standard is valid for machines which are used to spread the following media:

- a) spreading agents with or without pre-wetted agent;
- b) abrasive spreading agents;
- c) brine.

The following points are not covered by this standard:

- requirements for registration and approval;
- requirements made by automobile manufacturers;
- requirements on safety – these are dealt with in EN 13021.

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.

EN 13021, *Winter service machines — Safety requirements*

EN 15144:2007, *Winter maintenance equipment — Terminology — Terms for winter maintenance*

EN 15430-1, *Winter and road service area maintenance equipments — Data acquisition and transmission — Part 1: In vehicle data acquisition*

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

EN 15432, *Winter and road service area maintenance equipments — Front-mounted equipments — Interchangeability*

EN 60529, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15144:2007 apply.