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Road operation machinery - Safety - Part 2: Specific
requirements for road surface cleaning machines

EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 17106-2:2021 sisaldab Euroopa standardi EN 17106-2:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 17106-2:2021 consists of the English text of the European standard EN 17106-2:2021.
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EUROPEAN STANDARD

EN 17106-2

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English Version

Road operation machinery - Safety - Part 2: Specific requirements for road surface cleaning machines

Machines d'exploitation des routes - Sécurité - Partie 2
: Prescriptions spécifiques pour les machines de
nettoie ment des surfaces routi ères

Maschinen für den Straßenbetriebsdienst - Sicherheit -
Teil 2 Spezifische Anforderungen für Kehrmaschinen

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European foreword

This document (EN 17106-2:2021) has been prepared by Technical Committee CEN/TC 151 “Construction equipment and building material machines - Safet”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2022, and conflicting national standards shall be withdrawn at the latest by April 2022.

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 EN 13019:2001+A1:2008, EN 13021:2003+A1:2008 and EN 13524:2003+A2:2014.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

EN 17106:2021 consists of the following parts under the general title “Road operation machinery – Safety”:

- Part 1: General requirements
- Part 2: Specific requirements for road surface cleaning machines
- Part 3-1: Winter service machines - Specific requirements for snow clearing machines with rotating tools and snow ploughs
- Part 3-2: Winter service machines - Specific requirements for spreading machines
- Part 4: Road service area maintenance machines - Specific requirements for grass and brush cutting machines

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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 a type-C standard as stated in EN ISO 12100:2010.

This document is of relevance, in particular, to the following stakeholder groups representing the market players with regard to machinery safety:

- machine manufacturers (small, medium and large enterprises);
- health and safety bodies (regulators, accident prevention organizations, market surveillance etc.).

Others can be affected by the level of machinery safety achieved with the means of the document by the above-mentioned stakeholder groups:

- machine users/employers (small, medium and large enterprises);
- machine users/employees (e.g. trade unions, organizations for people with special needs);
- service providers, e.g. for maintenance (small, medium and large enterprises);
- consumers (in case of machinery intended for use by consumers).

The above-mentioned stakeholder groups have been given the possibility to participate at the drafting process of this document.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the Scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

1 Scope

This document together with EN 17106-1:2021 deals with all significant hazards, hazardous situations and events relevant to road surface cleaning machines (as defined in EN 15429-1:2007 and EN 17106-1:2021, 3.7) when used as intended and under the conditions of misuse which are reasonably foreseeable by the manufacturer (see Annex B) associated with the whole lifetime of the machine as described in EN ISO 12100:2010, 5.4.

The requirements of this document are complementary to the common requirements formulated in EN 17106-1:2021. This document does not repeat the requirements from EN 17106-1:2021 but supplements or modifies the requirements for road surface cleaning machines.

This document is not applicable to road surface cleaning machines manufactured before the date of its publication.

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 1829-1:2021, *High pressure water jet machines - Safety requirements - Part 1: Machines*

EN 15429-1:2007, *Sweepers - Part 1: Classification and Terminology*

EN 15429-4:2015, *Sweepers - Part 4: Symbols for operator controls and other displays*

EN 17106-1:2021, *Road operation machinery - Safety - Part 1: General requirements*

EN 60335-2-72:2012, *Household and similar electrical appliances - Safety - Part 2-72: Particular requirements for floor treatment machines with or without traction drive, for commercial use*

EN 60335-2-79:2012, *Household and similar electrical appliances - Safety - Part 2-79: Particular requirements for high pressure cleaners and steam cleaners*

EN ISO 2867:2011, *Earth-moving machinery - Access systems (ISO 2867:2011)*

EN ISO 3744:2010, *Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering methods for an essentially free field over a reflecting plane (ISO 3744:2010)*

EN ISO 11201:2010, *Acoustics - Noise emitted by machinery and equipment - Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections (ISO 11201:2010)*

EN ISO 12100:2010, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1:2015, *Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design (ISO 13849-1:2015)*

EN ISO 13850:2015, *Safety of machinery - Emergency stop function - Principles for design (ISO 13850:2015)*

EN ISO 14119:2013, *Safety of machinery - Interlocking devices associated with guards - Principles for design and selection (ISO 14119:2013)*

ISO 5006:2017, *Earth-moving machinery - Operator's field of view - Test method and performance criteria*

ISO 26322-2:2010, *Tractors for agriculture and forestry - Safety - Part 2: Narrow-track and small tractors*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17106-1:2021, EN 15429-1:2007 and EN ISO 12100:2010 and the following apply.

NOTE Further terminology can be found in Annex A.

3.1

road surface cleaning machine (sweeper)

machine for removal of spoil on traffic areas, where the machine is permanently fixed or demountable from a carrier vehicle or specially designed chassis

3.2

demountable machine

machine (e.g. hopper, sweeping gear, washing/flushing system, pick-up system), that may be demounted from and remounted to the carrier vehicle

3.3

hopper

container for the collected sweepings or spoil

3.4

wander hose

manually operated dirt pick-up system

3.5

water lance

manually operated washing/flushing system

3.6

operator station

area from which an operator controls the travel and/or work functions of the machine

Note 1 to entry: For road surface cleaning machines these specific work functions could apply:

- sweeping;
- sucking with wander hose;
- cleaning with hand-held cleaning device (e.g. high-pressure water lance);
- discharge of the hopper, dirt water.

3.7

washing/flushing system

system using water to clean a surface using high velocity jets and/or copious use to move and dislodge spoil from the surface being cleaned; the system may use scrubbing brooms and/or detergents to aid the cleansing function