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**Stroji za obdelovanje cestišč - Varnostne zahteve**

Road surface treatment machines - Safety requirements

Maschinen für die Straßenoberflächenbehandlung - Sicherheitsanforderungen

Machines pour le traitement des surfaces routières - Prescriptions de sécurité

**Ta slovenski standard je istoveten z: EN 13020:2004/FprA1**

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## Road surface treatment machines - Safety requirements

Machines pour le traitement des surfaces routières -  
Prescriptions de sécurité

Maschinen für die Straßenoberflächenbehandlung -  
Sicherheitsanforderungen

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 151.

This draft amendment A1, if approved, will modify the European Standard EN 13020:2004. 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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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 13020:2004/FprA1:2009) has been prepared by Technical Committee CEN/TC 151 "Construction equipment and building material machines - Safety", the secretariat of which is held by DIN.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate 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 Annexes ZA or ZB, which are integral parts of this document.

**EN 13020:2004/FprA1:2009 (E)****1 Modification to the Introduction**

*In the 1<sup>st</sup> paragraph, replace "EN 1070" with "EN ISO 12100-1".*

**2 Modification to the Scope**

*In the 1<sup>st</sup> indent, replace "sprayers" with "binder sprayers [or sprayers]".*

*In the 2<sup>nd</sup> indent, replace "aggregate spreaders" with "chipping spreaders [or spreaders]".*

*In the 3<sup>rd</sup> indent, replace "(spot mix patching units)" with "(binder sprayer chipping spreader [or sprayer spreader])".*

*Add the following indent as new 5<sup>th</sup> indent: "*

— joint sealer;"

*Replace the 6<sup>th</sup> indent with the following new indent:"*

— micro-surfacing machines/slurry machines;"

*In the 5<sup>th</sup> paragraph, add the following text as last sentence:*

"Vibrations are not dealt with in the standard, because for all machines of this family vibration is not a relevant hazard due to the low working speed and special working conditions (e.g. flat surface)."

*Add the following text as new 7<sup>th</sup> paragraph:*

"This document does not include requirements of the 94/55/EC Directive related to transport of dangerous goods by road but contains additional specifications in link with these existing requirements."

*Add a NOTE after the 7<sup>th</sup> paragraph:*

"NOTE e.g. bitumen binder sprayers [or sprayers] are covered by the 94/55/EC Directive."

**3 Modification to Clause 2, Normative references**

*Delete:*

"EN 563:1994, *Safety of machinery — Temperatures of touchable surfaces — Ergonomic data to establish temperature limit values for hot surfaces*"

"EN 1070:1998, *Safety of machinery — Terminology*"

*Replace "EN 500-1:1995" with "EN 500-1:2006"*

*Replace "EN ISO 2860" with "EN ISO 2860:2008".*

*Replace "EN ISO 2867, *Earth-moving machinery — Access systems (ISO 2867:1994)*" with "EN ISO 2867:2008, *Earth-moving machinery — Access systems (ISO 2867:2006, including Cor 1:2008)*".*

*Replace "EN ISO 3457:2003" with "EN ISO 3457:2008".*

Replace "ISO 6750:1984, *Earth-moving machinery — Operation and maintenance — Format and content of manuals*" with "ISO 6750:2005, *Earth-moving machinery — Operator's manual — Content and format*".

Add:

"EN 12999:2002, *Cranes — Loader cranes*"

"EN ISO 13732-1:2008, *Ergonomics of the thermal environment — Methods for the assessment of human responses to contact with surfaces — Part 1: Hot surfaces (ISO 13732-1:2006)*"

EN ISO 13857:2008, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*"

Replace the title of "EN ISO 12100-1:2003" with "*Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*".

## 4 Modification to Clause 3, Terms and definitions

In the 1<sup>st</sup> paragraph, replace "EN 1070:1998" with "EN ISO 12100-1:2003".

### 3.1 sprayer

Replace the term and definition with the following text:"

#### 3.1 binder sprayer [or sprayer]

machine intended to spray automatically or manually a film of binder (bitumen/emulsion) on the road surface at a predetermined rate. Storage of the binder is provided by tanks (tank type sprayers) mounted usually on a carrier vehicle (see informative Annex B, Figure B.1) or by barrels (barrels type sprayers). The machine can be mounted on a semi-trailer, a trailer (see informative Annex B, Figure B.2) or can be self-propelled

NOTE 1 Bitumen is a dangerous good in regard to TDG (94/55/EC -Transport of dangerous goods) regulation.

NOTE 2 Bitumen emulsion is a product with a temperature below 100 °C and out of the scope of TDG (94/55/EC - Transport of dangerous goods) regulation."

### 3.2 aggregate spreader

Replace the term and definition with the following text: "

#### 3.2 chipping spreader [or spreader]

machine used to spread a layer of chippings on the pavement at a predetermined rate (see informative annex)

Some of these machines can be equipped with a loading device (e.g. bucket, stick, boom).

NOTE Several types of chippings spreaders may be identified e.g. mounted on a carrier vehicle (truck) or self-propelled."

### 3.3 spot mix patching unit

Replace the term and definition with the following text:"

**EN 13020:2004/FprA1:2009 (E)****3.3****binder sprayer chipping spreader [or sprayer spreader]**

machine used for coating roads with binder (bitumen/emulsion) and with aggregates in a single operation"

**3.4****mastic asphalt mixer**

*Replace at the end of definition "the mastic asphalt with direct or indirect heating" with "transporting, heating (over 100 °C), mixing and discharging mastic asphalt. This machine can be mounted on a carrier-vehicle, semi-trailer, trailer or can be self-propelled "*

**3.5****hot asphalt container**

*Delete.*

*Add following new term and definition:"*

**3.5****joint sealer**

machine consisting of a tank with horizontal or vertical mixer and designed for melting and preparing mastics (over 100 °C) that are used in treating roadway joints and cracks"

**3.6****micro-asphalt paving machine**

*Replace the term and definition with the following text:"*

**3.6****micro-surfacing machines/slurry machines**

machine usually mounted on a truck (or a semi-trailer) designed for the production of slurries and micro-surfacing which contains all necessary components (e.g. emulsion, water, cement, additives) in separated tanks"

**3.7****demountable equipment**

*Add the following text at the end of sentence:*

*", e.g. chipping spreader or binder sprayer [or sprayer]"*

**5 Modification to Clause 4, List of significant hazards**

*In Table 1, replace the head of table with the following text:*



"

Hazards	Relevant clauses				
	Binder sprayer [or sprayer]	Chipping spreader [or spreader]	Binder sprayer chipping spreader [or sprayer spreader]	Mastic asphalt mixer and micro-surfacing machines/ Slurry machines	Micro-surfacing machines/ Slurry machines

"

## 6 Modification to Clause 5, Safety requirements and/or measures

### 5.1 Introduction

*In the 2<sup>nd</sup> paragraph, delete "EN 563 and".*

*Add "and EN ISO 13732-1" after "EN 982".*

### 5.2 General and common requirements

#### 5.2.3 Hot surfaces

*Replace the heading of 5.2.3 with the following:*

#### "5.2.3 Protective measures and devices"

*Add new sub- clause:*

##### "5.2.3.1 Hot parts"

*In the 1<sup>st</sup> paragraph, replace "EN 563" with "EN ISO 13732-1".*

*In the 1<sup>st</sup> paragraph, add at the beginning of the 2<sup>nd</sup> sentence the following: "Where necessary" and delete "e. g. perforated plates in front of or around the hot surfaces), heat insulation of tanks and pipes or be positioned to avoid unintended risk of contact".*

*In the 3<sup>rd</sup> sentence, add "spray bar," after "e. g.".*

*In the 2<sup>nd</sup> paragraph, add "the contact surface, e.g. handle, grip of" after "Temperatures of" and replace "EN 563" with "EN ISO 13732-1".*

*Add following new sub-clauses:*

##### "5.2.3.2 Moving parts"

All moving parts which create a hazard shall be designed, constructed, positioned or provided with protection devices to minimise the risk of crushing, shearing and cutting.

The mobile parts shall be protected by protective devices or guards in accordance with EN ISO 13857.

Where guarding is impractical, e.g. spray bar, chips distributor extension, adequate warning signs shall be employed advising on the nature of the risk and avoidance measures described in information for use.

**EN 13020:2004/FprA1:2009 (E)****5.2.3.3 Guards****5.2.3.3.1 General**

Guards shall be designed to be securely held in place and prevent access to dangerous areas and parts where a hazard exists.

Engine compartment panels are regarded as guards.

Guards shall comply with EN ISO 3457:2008.

**5.2.3.3.2 Movable guards**

Movable guards shall as far as possible remain attached to the machine when open.

Movable guards shall be fitted with a support system (e.g. springs, gas cylinders) to secure them in opened position up to a wind speed of 8 m/s.

**5.2.3.3.3 Fixed guards**

Fixed guards that are to be removed as a part of maintenance described in the operators manual, shall be fixed by systems that can be opened or removed only with tools. These guards fixing systems shall remain attached to the guards or to the machinery when the guards are removed. Where possible, guards shall be incapable of remaining in place without their fixings."

**5.2.7 Attachment fittings**

*Replace the heading of 5.2.7 with the following:*

**"5.2.7 Attachment fittings/trailers"**

*In the 1<sup>st</sup> paragraph, replace "Attachment fittings" with "Attachment fittings/trailers".*

*Replace "NOTE" with "NOTE 1".*

*In NOTE 1, replace "ISO 730-1" with "ISO 730".*

*Add the following text after NOTE 1:*

"There shall be an appropriate connection between a trailer and the machinery for the operation of signals.

NOTE 2 e.g. ISO 1724, ISO 1185, ISO 3731, ISO 12098 can be used as guidance."

**5.2.8 Actuators**

*Add following new paragraphs at the end:*

"From each control position, the operator shall be able to ensure that no-one is in the danger zones, or the control system shall be designed and constructed in such a way that starting is prevented while someone is in the danger zones.

If the visibility from the operator's station to the rear is obstructed due to the design requirements or the working application of the machine (e. g. spray spreaders, slurry machines, and mastic asphalt mixers with working conditions producing obstruction (e.g. airborne binder or soil particles, steam)) and therefore adequate visibility in accordance to the first paragraph cannot be achieved, the machine shall be equipped with a visual and/or acoustic warning signal activated automatically when a reversing command is given,