
Varovalna obleka za uporabnike ročnih verižnih žag - 9. del: Zahteve za zaščitne dokolenice (gamaše) za uporabnike verižnih žag

Protective clothing for users of hand-held chain saws - Part 9: Requirements for chain saw protective gaiters

Schutzkleidung für die Benutzer von handgeführten Kettensägen - Teil 9: Anforderungen an Schutzgamaschen für Kettensägen

Vêtements de protection pour utilisateurs de scies à chaîne tenues à la main - Partie 9: Exigences pour les guêtres de protection pour l'utilisation de scies à chaîne

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Ta slovenski standard je istoveten z: EN 381-9:1997

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13.340.50 Varovanje nog in stopal Leg and foot protection

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en

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EUROPEAN STANDARD

EN 381-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 1997

ICS 13.340.10

Descriptors: personal protective equipment, accident prevention, safety, chain saws, protective clothing, legs, notch strength, specifications, marking, graphic symbols

English version

**Protective clothing for users of hand-held chain
saws - Part 9: Requirements for chain saw
protective gaiters**

Vêtements de protection pour utilisateurs de
scies à chaîne tenues à la main - Partie 9:
Exigences pour les guêtres de protection pour
l'utilisation de scies à chaîne

Schutzkleidung für die Benutzer von
handgeführten Kettensägen - Teil 9:
Anforderungen an Schutzgamaschen für
Kettensägen

This European Standard was approved by CEN on 1997-03-10. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets" 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 October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

EN 381 "Protective clothing for users of hand held chainsaws" includes the following parts:

- Part 1: Test rig for testing resistance to cutting by a chains
- Part 2: Test rig for leg protection
- Part 3: Test methods for footwear
- Part 4: Test method for chainsaw protective gloves
- Part 5: Requirements for leg protection
- Part 7: Requirements for chainsaw protective gloves
- Part 8: Test methods for chainsaw protective gaiters
- Part 9: Requirements for chainsaw protective gaiters

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This European Standard 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 Annex ZA, which is an integral part of this European Standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

This European Standard forms part of a series concerned with personal protective equipment designed to protect against the risks arising from the use of chain saws.

No personal protective equipment can ensure 100% protection against cutting by a chain saw.

Nevertheless, experience has shown that it is possible to design personal protective equipment which offers a certain degree of protection.

Different functional principles may be applied in order to give protection.

These include:

- a) chain slipping: on contact the chain does not cut the material;
- b) clogging: fibres are drawn by the chain into the drive sprocket and block chain movement;
- c) chain braking: fibres have a high resistance to cutting and absorb rotational energy, thereby reducing down the chain speed.

Often more than one principle is applied.

1 Scope

This European Standard specifies requirements to be used to assess the resistance of gaiters to cutting by hand-held chain saws and other properties. A requirement for the strength of underfoot straps of gaiters is also included.

This European Standard is applicable to gaiters used together with safety footwear according to EN 345:1992 and EN 345:1992/A1 with a metallic toecap, because gaiters offer only partial protection against chain saw cutting.

Gaiters according to this European Standard are not intended for use in situations where there is a significant risk of tripping such as tree climbing or in forests.

The test methods associated with the requirements in this European Standard are given in EN 381-8.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendments or revision. For undated references the latest edition of the publication referred to applies.

EN 345:1992, EN 345:1992/A1

Specification for safety footwear for professional use

EN 381-8:1997

Protective clothing for users of hand-held chain saws - Part 8: Test method for chain saw protective gaiters

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3 Definitions

For the purposes of this European Standard the following definitions apply:

3.1 Foot protector

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Any product which protects the foot and the lower part of the leg (or any part of this area) against cutting by a hand-held chain saw.

3.2 Gaiter

A removable covering intended to protect the front part of the foot, ankle and lower leg against cutting by a hand-held chain saw [EN 381-8].

3.3 Protective material

Material which is designed to resist the cutting effect of a hand-held chain saw.

3.4 Protective coverage

The area of the gaiter which is covered by protective material.

4 Requirements

4.1 Fasteners

4.1.1 General

Gaiter fasteners shall not be of touch and close type.

4.1.2 Underfoot straps

When tested in accordance with the procedure described in clause 6 of EN 381-8:1997 each underfoot strap shall not fail at a force below 250 N.

When tested in accordance with the procedure described in clause 6 of EN 381-8:1997 the distance moved by the hook between loads of 25 N and 250 N shall be less than 50 mm.

4.2 Specified protective area

The protective coverage of the gaiter shall at least cover the area of the artificial boots (see 5.3.2.1 of EN 381-8:1997) shown in Figure 1 i.e.:

- a) horizontally - from a line no more than 14 mm behind the end of the artificial boot, to two lines in the same vertical plane sited at least 80 mm either side of the centre line of the front of the boot, measured at a height of (225 ± 2) mm above the lower surface of the artificial boot.
- b) vertically - from the line no more than 25 mm above the lower surface of the artificial boot to at least 200 mm above this line.

4.3 Classification according to chain speed

The classification shall be made with the following 4 speeds:

Class of protection 0 : 16 m/s NOTE: Class of protection 0 is valid until 1999-12-31
 Class of protection 1 : 20 m/s
 Class of protection 2 : 24 m/s
 Class of protection 3 : 28 m/s

4.4 Requirements to cut resistance

When tested according to clause 5.4 of EN 381-8:1997 no cut through is allowed in the leather covering the boot form under any tested specimen.

5 Marking

Gaiters for users of chain saws shall be durably marked with at least the following:

- name or trade mark or other means of identification of the manufacturer and/or his authorized representative;
- type identification or style No. (company identification of model);
- serial number/batch number;
- date of manufacture (year and month);
- the number of this European Standard: EN 381-9;
- size designation of the combinable safety footwear;
- speed classification. This information shall be given outside the frame of the pictogram showing a chain saw, preferably on the bottom of the frame;
- the sentence "If the protective material is damaged, the gaiter is to be discarded", or similar;
- washing/cleaning instructions including warnings against incorrect treatment;
- the text "Only to be worn in conjunction with safety footwear conforming to EN 345:1992 and EN 345:1992/A1"

6 Information supplied by the manufacturer

Gaiters for users of chain saws shall be supplied with an unambiguous information for the user, in the language(s) of the country of purchase. The information for the user shall at least contain the following:

- the information given in the marking;
- name, address and telephone number of manufacturer and/or his authorized representative;
- instructions about repair of the gaiter especially pointing out that it is not allowed to repair the protective material;
- instruction that the protective area and material shall not be altered in any way and that once cut into, the gaiter should be discarded;
- a warning that the gaiters are not intended for use in situations where there is a significant risk of tripping such as tree climbing or in forests.
- criteria for discarding the gaiter;
- instructions for correct fastening;
- instructions on the protective coverage, i.e. a figure with size designation (or a statement of the range of footwear sizes with which the gaiter may be worn) plus advice as to the area the gaiter should cover. This should include the information that gaiters should always:
 - a) overlap the toe cap of the wearer boots by at least 30 mm;
 - b) not overlap the boot sole to such an extent that it causes a trip hazard;
 - c) not leave an unprotected space between the edge of the gaiter and the sole.
- the text "Does not protect against all risks" or similar.

7 Pictogram

Gaiters complying with this European Standard shall be marked with the pictogram shown in figure 2. The pictogram shall be placed at any visible place on each gaiter and have a minimum size 30 mm x 30 mm.

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Dimensions in millimetres

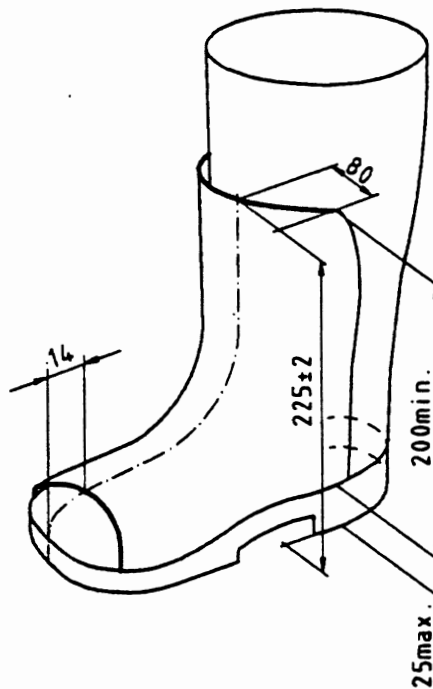


Figure 1: Specified protective area (as marked on artificial boot)



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x - class of protection

Figure 2: Pictogram indicating protection against chain saw cutting