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STN	**Ochranné odevy pre používateľov ručných reťazových píl Časť 6: Skúšobné metódy a požiadavky na vyhotovenie chráničov hornej časti tela (ISO 11393-6: 2018)**	**STN EN ISO 11393-6** 83 2720

Protective clothing for users of hand-held chainsaws - Part 6: Performance requirements and test methods for upper body protectors (ISO 11393-6:2018)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/19

Rozpracované prekladom.

Obsahuje: EN ISO 11393-6:2019, ISO 11393-6:2018

Oznámením tejto normy sa ruší
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NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11393-6

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Supersedes EN 381-10:2002, EN 381-11:2002

English Version

Protective clothing for users of hand-held chainsaws - Part 6: Performance requirements and test methods for upper body protectors (ISO 11393-6:2018)

Vêtements de protection pour utilisateurs de scies à chaîne tenues à la main - Partie 6: Exigences de performance et méthodes d'essai pour protecteurs du haut du corps (ISO 11393-6:2018)

Schutzkleidung für die Benutzer handgeführter Kettensägen - Teil 6: Prüfverfahren und Leistungsanforderungen für Oberkörperschutzmittel (ISO 11393-6:2018)

This European Standard was approved by CEN on 18 July 2019.

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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.

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

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

Ref. No. EN ISO 11393-6:2019 E

EN ISO 11393-6:2019 (E)

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European foreword

This document (EN ISO 11393-6:2019) has been prepared by Technical Committee ISO/TC 94 "Personal safety - Personal protective equipment" in collaboration with 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 January 2020, and conflicting national standards shall be withdrawn at the latest by January 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 EN 381-11:2002 and EN 381-10:2002.

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

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, 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.

Endorsement notice

The text of ISO 11393-6:2018 has been approved by CEN as EN ISO 11393-6:2019 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of REGULATION (EU) 2016/425 aimed to be covered

This European Standard has been prepared under a Commission's standardization request to provide one voluntary means of conforming to essential requirements of Regulation (EU) 2016/425 on the approximation of the laws of the Member States relating to personal protective equipment.

Once this standard is cited in the Official Journal of the European Union under that Regulation, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Regulation and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and and Regulation (EU) 2016/425

Essential Requirements of REGULATION (EU) 2016/425	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
1.1.1. Ergonomics	4.4	
1.1.2.1. Optimum level of protection	4.4	
1.1.2.2. Classes of protection appropriate to different levels of risk	5	
1.2.1. Absence of inherent risks and other nuisance factors	4.4; 4.5; 4.6; 4.8	
1.2.1.1. Suitable constituent materials	4.2	
1.2.1.2. Satisfactory surface condition of all PPE parts in contact with the user	4.4	
1.2.1.3. Maximum permissible user impediment	4.4	
1.3.1. Adaptation of PPE to user morphology	4.4; 11.1	
1.3.2. Lightness and strength	4.8	
1.4. Manufacturer's instructions and information	13; 15	
2.4. PPE subject to ageing	13 c); 15 q)	

2.12. PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety	14	
3.3. Protection against mechanical injuries	4.7	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

INTERNATIONAL STANDARD

ISO 11393-6

Second edition
2018-09

Protective clothing for users of hand-held chainsaws —

Part 6: Performance requirements and test methods for upper body protectors

Vêtements de protection pour utilisateurs de scies à chaîne tenues à la main —

Partie 6: Exigences de performance et méthodes d'essai pour protecteurs du haut du corps

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 162, *Protective clothing including hand and arm protection and lifejackets*, in collaboration with ISO Technical Committee TC 94, *Personal safety — Personal protective equipment*, Subcommittee SC 13, *Protective clothing*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 11393-6:2007), which has been technically revised. The main changes compared to the previous edition are as follows:

— in the Introduction, the term "hand-held chainsaws primarily constructed for cutting wood" has been added;

— the normative references have been updated;

— the term and definition 3.1 has been added;

— Clause 4 has been revised, design B jackets have been added in 4.5 and an evaluation of the protective insert after pre-treatment with 60 °C and spin-drying has been added in 4.6;

— in Clause 6, the pre-treatment procedure has been revised;

— in Clause 8, the definition has been specified;

— in 9.7, the cut test at the sleeve has been changed;

— in Clause 10, descriptions have been specified and the test procedure has been revised;

— in Clause 11, the test procedure has been revised and a test procedure has been added in 11.3;

— Clauses 12, 13 and 14 have been specified;

— Clause 15 has been revised;

— in Annex A, the definition has been revised.

A list of all parts in the ISO 11393 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document forms part of a series concerned with personal protective equipment (PPE) designed to protect against the risks arising from the use of hand-held chainsaws primarily constructed for cutting wood.

Accidents occur due to a number of complex reasons, but a common factor is incorrect use of the chainsaw. The importance of correct training and proper use of a chainsaw in preventing accidents cannot be underestimated.

All parts of the upper body have been shown to be at risk when using a chainsaw. In this document, specifications for the protective coverage and performance of the upper body protectors are given.

No PPE can ensure a 100 % protection against cutting from a hand-held chainsaw. Nevertheless, experience has shown that it is possible to design PPE that 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 the chain speed.

Often more than one principle is applied in chainsaw protective clothing. Upper body protectors in accordance with this document are meant to be used while working off the ground, and where risk assessment shows that there is a significant risk of being cut by the moving chain on the upper part of the body, such as when working from a sky lift and carrying out tree surgery.

INTERNATIONAL STANDARD **ISO 11393-6:2018(E)**

Protective clothing for users of hand-held chainsaws —

Part 6: Performance requirements and test methods for upper body protectors

1 Scope

This document specifies the performance requirements, test methods, design requirements, identification and marking information for upper body protectors that offer protection against cutting by hand-held chainsaws.

It also specifies procedures for sampling and pre-treatment of upper body protectors, the measurement of the protective coverage, the apparatus and test methods for assessing resistance to cutting, and the practical performance test for evaluating ergonomic properties.

Guidance on chainsaw use and the selection of appropriate upper body protectors is given in Annex A.

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.

ISO 5077, *Textiles — Determination of dimensional change in washing and drying*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

ISO 11393-1:2018, *Protective clothing for users of hand-held chainsaws — Part 1: Test rig driven by a flywheel for testing resistance to cutting by a chainsaw*

ISO 11393-3:2018, *Protective clothing for users of hand-held chainsaws — Part 3: Test methods for footwear*

ISO 13688:2013, *Protective clothing — General requirements*

ISO 13935-2, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 2: Determination of maximum force to seam rupture using the grab method*

