SLOVENSKI STANDARD
SIST EN 863:1996

01-december-1996

Varovalna obleka - Mehanske lastnosti - Preskusna metoda: odpornost proti prebadanju

Protective clothing - Mechanical properties - Test method: Puncture resistance

Schutzkleidung - Mechanische Eigenschaften - Prüfverfahren: Widerstand gegen Durchstoßen

iTeh STANDARD PREVIEW

Vetements de protection - Propriétés mécaniques - Méthode d'essai: Résistance a la perforation

(standards.iteh.ai)

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996

Ta slovenski standard je istoveten z: **EN 863:1995**

ICS:

13.340.10 Varovalna obleka Protective clothing

SIST EN 863:1996 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996

EUROPEAN STANDARD **EN 863**

NORME EUROPÉENNE

EUROPÄISCHE NORM September 1995

ICS 13.340.10

Descriptors: personal protection equipment, accident prevention, protective clothing, mechanical properties, tests, measurements, perforating strength

English version

Protective clothing - Mechanical properties - Test method: Puncture Resistance

Vêtements de protection - Propriétés mécaniques - Méthode d'essai: Résistance à la perforation

Schutzkleidung - Mechanische Eigenschaften - Prüfverfahren: Widerstand gegen Durchstoßen

This European Standard was approved by CEN on 1995-06-18. 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996

CEN

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

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

© 1995 All rights of reproduction and communication in any form and by any means reserved in all countries to CEN and its members.

Ref. No. EN 863:1995 E

Contents

Foreword

This European Standard was prepared by CEN/TC 162 "Protective clothing including hand and arm protection and lifejackets", the secretariat of which is held by DIN.

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 the EC Directive 89/686/EEC.

For relationship with EC Directives, see informative annex ZA, which is an integral part of this standard.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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 March 1996, and conflicting national standards shall be withdrawn at the latest by March 1996.

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/b553885d-9e60-4076-a51e-caebd225ed01/sist-en-863-1996

According to the CEN/CENELEC Internal Regulations, 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, United Kingdom.

1 Scope

This European Standard specifies a test method for measuring the puncture resistance of protective clothing or materials used for these products.

The puncture resistance is expressed as the maximum force required to push a spike with a specified speed through the test specimens.

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 amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 10002-2	Metallic materials - Tensile testing - Part 2: Verification of the force measuring system of the tensile testing machines
ISO 2231:1989	Rubber- or plastics-coated fabrics - Standard atmospheres for conditioning and testing

3 Test specimens

Take four representative test specimens from the sample, each 50 mm minimum diameter, so that the specimens fit between the bolt holes of the clamps.

4 Test method

4.1 Apparatus

4.1.1 Tensile testing machine

In this method a tensile testing machine type CRE as defined in EN 10002-2 is used and shall be capable of:

- a vertical travel of at least 100 mm,
- a constant rate of compression of (100 ± 10) mm/min,
- a recording apparatus for the force and deformation.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

4.1.2 Test spike

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996

The test spike shall be made of steel, with a minimum hardness of 60 HRC and shall have the dimensions and the characteristics as shown in figure 1.

The test spike shall be checked by an optical enlargement after every 500 tests or at least once a year. When testing materials, which wear out the test spike, the optical checks should be done more frequently. If this test shows that the test spike dimensions do not comply with the dimensions of figure 1, the test spike shall be discarded.

NOTE: The control of the dimensions of the test spike is important. It is

recommended that every test laboratory maintains an internal reference material to do regular checks in the result of the testing.

4.1.3 Clamps

The clamping rings have to prevent slippage during the test. They consist of two 10 mm minimum thick steel plates, each having a (20 ± 0,5) mm diameter hole in the center and four clamping bolts, as shown in figure 2.

NOTE: Gripping aids can be used if necessary to prevent slippage or reduce damaging of the specimen.

4.2 Conditioning

The specimens shall be conditioned and the test shall be conducted in the standard atmosphere as described in ISO 2231, i. e. at a relative humidity of (65 ± 5) % and a temperature of (20 ± 2) °C. Conditioning at a specified relative humidity may be omitted if it can be shown that the results for the type of material under test were not affected.

4.3 Procedure

Secure the specimen between the clamping rings with the outer surface exposed to the test spike, tighten the nuts sufficiently to ensure no slippage of, or damage to, the specimen. Place the specimen and the clamping rings in the tensile testing machine. Advance the spike on to and through the specimen at a rate of (100 ± 10) mm/min. If the spike fails to penetrate after a movement of 25 mm after contact with the specimens, the test is terminated. This shall be referred to in the test report.

Repeat the procedure on the remaining specimens.

Record for each test the maximum force (in Newtons) needed to penetrate the specimen.

5 Calculation of results

Calculate the arithmetical mean of the maximum force (in Newtons) needed to puncture the four test specimens, rounded to the nearest value.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

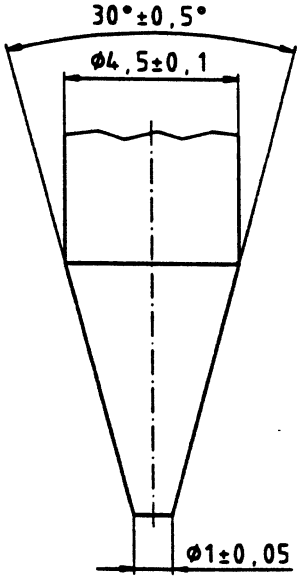
6 Test report

The test report shall include the following information:

SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-

- the number and the date of this European Standard;
- all details necessary for the identification of the sample tested;
- the results obtained for each test specimen;
- the mean value in Newtons;
- any deviation from the procedure, outlined in this standard.

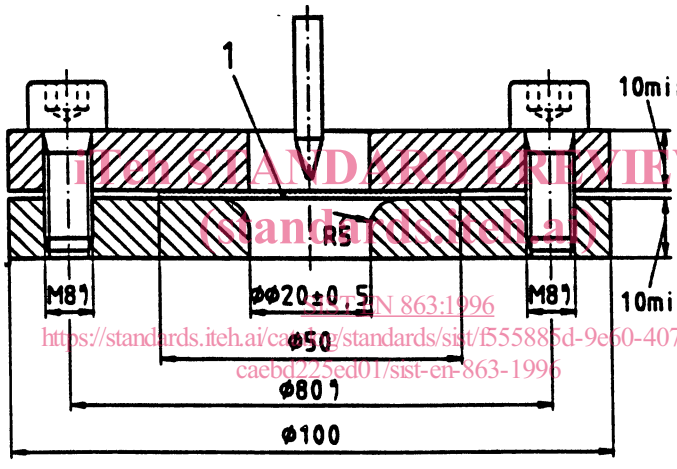
Dimensions in millimetres



Steel 60 HRC

Figure 1: Test spike

Dimensions in millimetres



iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996

1 Specimen

*) These figures are not critical

Figure 2: Typical clamps arrangement

Annex ZA (informative)

Clauses of this European Standard addressing essential requirements or other provisions of EC Directives

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 the EC Directive 89/686/EEC.

WARNING: Other requirements and other EC Directives may be applicable to the product(s) falling within the scope of this standard.

The clauses of this standard are likely to support requirements of 3.3 of Annex II "Protection against physical injury" of EC Directive 89/686/EEC.

Compliance with these clauses of this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated with EFTA requirements.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN 863:1996
https://standards.iteh.ai/catalog/standards/sist/f555885d-9e60-407b-a3fe-caebd225ed01/sist-en-863-1996