
**Protective clothing — General
requirements**

AMENDMENT 1

Vêtements de protection — Exigences générales

AMENDEMENT 1

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13688:2013/Amd 1:2021](https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021)

<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>



iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13688:2013/Amd 1:2021](https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021)
<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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 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 ISO/TC 94, *Personal safety* — *Personal protective equipment*, SC 13, *Protective clothing*.

ISO 13688:2013/Amd 1:2021

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13688:2013/Amd 1:2021](#)

<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>

Protective clothing — General requirements

AMENDMENT 1

Foreword

Replace

“— Additional definitions on waist to waist over the shoulder length, and torso.”

with

“— Additional definitions on waist to waist over the shoulder line, and torso.”

Normative references

Replace

“ISO 3071, *Textiles — Determination of pH of aqueous extract*

ISO 3175-1, *Textiles — Professional care, drycleaning and wetcleaning of fabrics and garments — Part 1: Assessment of performance after cleaning and finishing*

ISO 3635, *Size designation of clothes — Definitions and body measurement procedure*

ISO 3758, *Textiles — Care labelling code using symbols*

ISO 4045, *Leather — Chemical tests — Determination of pH*

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

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

ISO 17075, *Leather — Chemical tests — Determination of chromium(VI) content*

ISO 30023, *Textiles — Qualification symbols for labelling workwear to be industrially laundered*

EN 1811, *Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin*

EN 14362-1, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres*”

with

“ISO 3071:2020, *Textiles — Determination of pH of aqueous extract*

ISO 3175-1:2017, *Textiles — Professional care, drycleaning and wetcleaning of fabrics and garments — Part 1: Assessment of performance after cleaning and finishing*

ISO 3758:2012, *Textiles — Care labelling code using symbols*

ISO 4045:2018, *Leather — Chemical tests — Determination of pH*

ISO 5077:2007, *Textiles — Determination of dimensional change in washing and drying*

ISO 13688:2013/Amd.1:2021(E)

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

ISO 8559-1:2017, *Size designation of clothes — Part 1: Anthropometric definitions for body measurement*

ISO 8559-2:2017, *Size designation of clothes — Part 2: Primary and secondary dimension indicators*

ISO 14362-1:2017, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres*

ISO 14362-3:2017, *Textiles — Methods for determination of certain aromatic amines derived from azo colorants — Part 3: Detection of the use of certain azo colorants, which may release 4-aminoazobenzene*

ISO 17075-1:2017, *Leather — Chemical determination of chromium(VI) content in leather — Part 1: Colorimetric method*

ISO 17075-2:2017, *Leather — Chemical determination of chromium(VI) content in leather — Part 2: Chromatographic method*

ISO 30023:2010, *Textiles — Qualification symbols for labelling workwear to be industrially laundered*

EN 1811:2011+A1:2015, *Reference test method for release of nickel from products intended to come into direct and prolonged contact with the skin*

Terms and definitions

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Replace the actual definition 3.6

“3.6

waist to waist over the shoulder length

<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>

maximum length measured from the plane of the waist over the shoulder to the plane of the waist

Note 1 to entry See also Clause 6.”

with

“3.6

waist to waist over the shoulder line

distance from the back waist level vertically up to the middle of the shoulder line, and vertically down to the waist level, over the bust point in the front

Note 1 to entry See also Clause 6.”

4.2 a), b), c), d)

Replace

a) Chromium VI content in leather clothing shall not exceed 3 mg/kg according to ISO 17075.

b) All metallic materials which could come into prolonged contact with the skin (e.g. studs, fittings) shall have a release of nickel of less than 0,5 µg/cm² per week. The method of test shall be according to EN 1811.

c) Protective clothing material shall have a value greater than pH3,5 and less than pH9,5. The test method for leather shall be according to ISO 4045 and for textile materials according to ISO 3071.

d) Azo colorants which release carcinogenic amines listed in EN 14362-1 shall not be detectable by the method in these standards."

with

"a) Chromium VI content in leather clothing shall not exceed 3 mg/kg according to ISO 17075-1:2017 or ISO 17075-2:2017.

b) All metallic materials which could come into prolonged contact with the skin (e.g. studs, fittings) shall have a release of nickel of less than 0,5 µg/cm² per week. The method of test shall be according to EN 1811:2011+A1:2015.

c) Protective clothing material shall have a value greater than pH = 3,5 and less than pH = 9,5. The test method for leather shall be according to ISO 4045:2018 and for textile materials according to ISO 3071:2020.

d) Azo colorants that release carcinogenic amines listed in ISO 14362-1:2017 and ISO 14362-3:2017 shall not be detectable by the method in these standards."

5.1

Replace

"This International Standard is concerned only with the dimensional change caused by cleaning on the performance of the clothing and legibility of marking (see 5.3)."

with

"This document is concerned only with the dimensional change caused by cleaning (see 5.3) on the performance of the clothing and legibility of marking!"

<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>

5.2

Replace

"Manufacturers should typically indicate one or several of the various methods and processes of ISO 6330^[5], ISO 15797^[8], ISO 3175 (Parts 2 to 4) [2-3-4] or equivalent standardized processes for cleaning."

with

"Manufacturers should typically indicate one or several of the various methods and processes of ISO 6330^[5], ISO 15797^[8], ISO 3175-2 to ISO 3175-6^{[2][3][4][10][11]} or equivalent standardized processes for cleaning."

5.3

In the 1st paragraph, replace the last sentence:

"Measurement of dimensional change shall be carried out according to ISO 5077 and for dry cleaning in accordance with ISO 3175-1."

with

"Measurement of dimensional change shall be carried out according to ISO 5077:2007 and for dry cleaning in accordance with ISO 3175-1:2017."

Clause 6

In the 1st paragraph, replace the last sentence:

“Measurement procedures and the designation of dimensions shall correspond to ISO 3635, if not otherwise specified in other product standards (see also Annex D).”

with

“Measurement procedures shall correspond to ISO 8559-1:2017 and the designation of dimensions shall correspond to ISO 8559-2:2017, if not otherwise specified in other product standards (see also Annex D).”

Replace

“Table 1 — Body dimensions for sizing protective garment

No	Protective clothing	Control dimensions (ranges expressed as centimetres or kilograms)
1	jacket, coat, vest	chest or bust girth and height
2	Trousers	waist girth and height
3	Coverall	chest or bust girth and height
4	Aprons	chest or bust girth, waist girth and height
5	protective equipment (e.g. knee pads, back protectors, torso protector)	Select the relevant measurement: — chest or bust girth, waist girth and height — body weight — waist to waist over the shoulder length

The manufacturer can also designate additional measurements, e.g. the arm length, the inside leg length or the hip girth for women's garments. The value shall correspond to the actual value in centimetres of the user's body dimensions.

According to ISO 3635 and Annex D, the figures of size designations on the garment series should be used to indicate the size. Examples of size designations are shown in Annex D.”

with

“Table 1 — Body dimensions for sizing protective clothing

No	Protective clothing	Control dimensions ^a (ranges expressed as centimetres or kilograms)
1	jacket, coat, vest	chest or bust girth and height
2	Trousers	waist or hip girth and height
3	Coverall	chest or bust girth and height
4	Aprons	chest or bust girth, waist girth and height
5	protective equipment (e.g. knee pads, back protectors, torso protector)	Select the relevant measurement: — chest or bust girth, waist girth and height — knee girth — body weight — waist to waist over the shoulder line

^a Body dimensions are defined in ISO 8559-1:2017. Control dimensions are based on the primary and secondary dimensions as described in ISO 8559-2:2017, Table 1

The manufacturer can also designate additional measurements, e.g. the arm length, the inside leg length. The value shall correspond to the actual value in centimetres of the user's body dimensions.

According to ISO 8559-2:2017 and Annex D, the figures of size designations on the garment series should be used to indicate the size. Examples of size designations are shown in Annex D."

7.1

Replace

"— affixed so as to be visible and legible;"

"The use of numbers not smaller than 2 mm and pictograms not smaller than 10 mm"

with

"— affixed so as to be visible and legible^{[12][13]};"

"The use of numbers not smaller than 2 mm in height and pictograms not smaller than 10 mm in height"

7.2

Replace

"e) Pictograms and levels of performance, only if required by a product standard. Consequently, the pictogram of Annex E shall appear in the marking together with the specific product standard identification.

None of the pictograms in Annex E shall be placed on the marking unless required by the specific product standard.

As a type designation of a hazard or an application the pictogram shall be used as indicated in the marking requirements of the specific standard (see Tables E.1 and E.2 with pictogram symbols)."

with

"e) Pictograms and levels of performance, as they are required by a product standard. Consequently, the pictogram of Annex E shall appear in the marking together with the specific product standard identification.

As a type designation of a hazard or an application the pictogram shall be used as indicated in the marking requirements of the specific standard (see Tables E.1 and E.2 with pictogram symbols) or, without existing specific standard, the pictogram shall be selected in order to cover the concerned hazard subject to the responsibility of the manufacturer."

7.2

Replace

"f) Care labelling and/or qualification labelling

Care labelling and/or qualification labelling shall be given according to ISO 3758 and/or ISO 30023 if relevant."

with

"f) Care labelling and/or qualification labelling

Care labelling and/or qualification labelling shall be given according to ISO 3758:2012 and/or ISO 30023:2010 if relevant."

Figure B.1

Replace

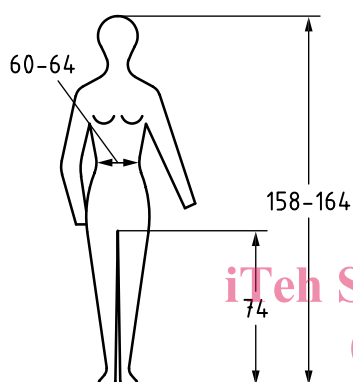
"Low risk/Low benefit"

with

"High risk/Low benefit"

Figure D.3

Replace the left bottom drawing of Figure D.3



iTeh STANDARD PREVIEW
(standards.iteh.ai)

with

<https://standards.iteh.ai/catalog/standards/sist/9f051334-43db-49fb-812e-655b5ec5c6ef/iso-13688-2013-amd-1-2021>

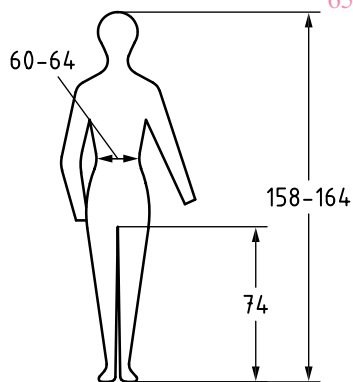


Figure D.4

Change the title of Figure D.4 from:

Figure D.4 — Torso protector for men

to

Figure D.4 — Torso protector

Table E.1