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Personal protective equipment — Occupational footwear

AMENDMENT 1

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Personal protective equipment — Occupational footwear

AMENDMENT 1

Clause 2 Normative references

Update the reference to "ISO 20344:2021" with "ISO 20344:2021+Amd.1:2024" and update the references throughout the document accordingly.

Change the title of EN 13832-3:2018 to read as follows:

"*Footwear protecting against chemicals — Part 3: Requirements for prolonged contact with chemicals*"

5.1, Table 2

In the section "Upper", add an "X" in the last two cells of the row "Tear strength" to read as follows:

Tear strength	5.4.3	X		X	X

In the section "Upper", add an "X" in the last two cells of the row "Water vapour permeability and coefficient", to read as follows:

Water vapour permeability and coefficient	5.4.6	X		X	X

5.3.2

Replace the subclause with the following:

"When tested in accordance with ISO 20344:2021+Amd.1:2024, 5.7 there shall be no leakage of air. For design A of class II footwear, this requirement is not applicable."

5.3.5, 3rd paragraph

Replace the paragraph with the following:

"For each leather part tested in accordance with ISO 20344:2021+Amd.1:2024, 6.11, the chromium VI content shall be less than 3,0 mg/kg."

5.4.1.1, 2nd sentence

Add the wording ", except for water vapour permeability and water vapour coefficient (see 5.4.6)." to the end of the sentence, to read as follows:

"Any materials in the upper below the height defined in Table 8 shall meet the requirements of the upper (see Table 2), except for water vapour permeability (WVP) and water vapour coefficient (WVC) (see 5.4.6)."

5.4.1.2

Replace the text above Figure 6 with the following:

"Hybrid footwear (3.18) consists of two classes of materials: foot section, Area A, class II material and extended section, area B, class I material.

The Area A, shall be measured as H, between the lowest point of the top of the visible polymer (or rubber) part and the ground (see Figure 6) and shall have a minimum height corresponding to the values given in Table 6 for design B. All material extensions above belong to area B.

All materials shall meet the requirements of the upper depending on the class of material (see Table 2)."

5.4.6

Replace the subclause with the following:

"Footwear shall comply with one of the following criteria's:

a. If the upper contains an area of maximum 10 % of non-water vapour permeable material, measured according to ISO 20344:2021+Amd.1:2024, 6.2.3, all remaining materials shall fulfil a water vapour permeability of at least 0,8 mg/(cm^2·h) and the water vapour coefficient shall be at least 15 mg/cm^2 when tested in accordance with ISO 20344:2021+Amd.1:2024, 6.6, 6.7 and 6.8

b. If the upper contains an area of maximum 50 % of non-water vapour permeable material, measured according to ISO 20344:2021+Amd.1:2024, 6.2.3, all remaining materials shall fulfil a water vapour permeability of at least 2,0 mg/(cm^2·h)"

5.5.4, Title

Add the abbreviations "WVP" and "WVC" to the title of the subclause, to read as follows:

"Water vapour permeability (WVP) and coefficient (WVC)"

5.5.4, 2nd paragraph

Add the wording "and WVC" to the end of the paragraph, to read as follows:

"No test is required, when lining material is present only in the heel area (5.2.3). When there is no stiffener or the stiffener is perforated, the material shall comply also WVP and WVC."

5.7.3, 2nd paragraph

Delete the word *"membrane"* in the sentence and add a 3rd paragraph, to read as follows:

"When the insole is covered by a lining, the test piece shall be taken from both, the lining and insole in combination.

The requirement is not applicable for the insoles, where a membrane construction fulfilling the requirement "WR" covers the insole."

5.7.4.1

Add the following second paragraph:

"No abrasion test on the insole is required if the lining or a part of the lining completely covers the insole."

5.8.5

Replace the subclause with the following:

"This requirement is not applicable for rigid outsoles (see ISO 20344:2021+Amd.1:2024, 8.5).

For outsoles tested in accordance with ISO 20344:2021+Amd.1:2024, 8.6,

— The cut growth shall be not greater than 4 mm after 30 000 flex cycles.

— Spontaneous cracks are acceptable, unless one of the following conditions occurs:

  — deeper than 1,5 mm;

  — longer than 4 mm;

  — more than five in number;

For footwear with metallic insert, any damage of the insert shall not be taken into account

NOTE The flexing resistance of metallic inserts is assessed according to 6.2.1.4.1."

5.8.7

Replace the subclause with the following:

"Tested in accordance with ISO 20344:2021+Amd.1:2024, 5.2, the bond strength between the various layers of multi-layer outsoles shall be not less than 4,0 N/mm. If there is tearing of the material, the measured strength shall not be less than 3,0 N/mm."

6.1

In Table 14, replace the term "Scuff cap abrasion" by "Scuff cap", to be in line with the changed title in 6.2.9.

6.2.1.1.3

Replace the subclause with the following:

"For footwear with non-metallic inserts (type PL) tested in accordance with ISO 20344:2021+Amd.1:2024, 5.10.4.2.2.:

— no perforation shall occur at any of the four measurements;

— no separation of the layers (tent effect ISO 22568-4:2021, 3.2) shall occur during all tests."

6.2.1.1.4

Add the following sentence at the end of the paragraph:

"No separation of the layers shall occur during all tests."

6.2.1.3

Add the following paragraph between paragraph 2 and 3:

"If the non-metallic perforation resistant insert is used as an insole (e.g., Strobel, cemented lasted) the above allowances are not applicable."

6.2.1.3

Add the following paragraph at the end of the subclause:

"Non metallic perforation resistant inserts and insoles shall have no holes other than those created by stitching."

6.2.6, last paragraph

Replace the paragraph with the following:

"Tested in accordance with ISO 20344:2021+Amd.1:2024, 5.22, the average value of the test results for outer ankle protection shall not exceed 10 kN and no single value shall exceed 15 kN. If inner ankle protection is claimed, it also shall meet these requirements."

6.2.8, Title

Replace the title with the following:

"Scuff cap"

6.2.8

Add the following text as a first paragraph:

"During the testing of ergonomic features (see ISO 20344:2021+Amd.1:2024, 5.1), when worn by a wearer during kneeling, the scuff cap shall prevent the contact between the upper and a flat ground."

Clause 7 e)

Delete "i.e. ISO 20347:2021", to read:

"e) reference to this document;"

Clause 7, last paragraph

Change the reference to EN 13832-3 to a dated reference:

"EN 13832-3:2018"

8.2

Add the following subclause as a new 8.2.1 and renumber the following subclauses accordingly:

"8.2.1 General

This document does not cover electrically insulating footwear as covered by EN 50321-1:2018[6]."

8.2.2 Antistatic footwear

Replace the text of the subclause with the following:

"Additional information shall be given regarding antistatic properties:

"Antistatic footwear should be used if it is necessary to minimize electrostatic build-up by dissipating electrostatic charges, thus avoiding the risk of spark ignition of, for example, flammable substances and vapours, and if the risk of electric shock from mains voltage equipment cannot be completely eliminated from the workplace. Antistatic footwear introduces a resistance between the foot and ground but may not offer complete protection. Antistatic footwear is not suitable for work on live electrical installations.

The electrical resistance of antistatic footwear can be changed significantly by flexing, contamination, or moisture. This footwear might not perform its intended function if worn in wet conditions.

Class I footwear can absorb moisture and can become conductive if worn in moist and wet conditions. Class II footwear is resistant to moist and wet conditions and should be used is if the risk of exposure exists.

If the footwear is worn in conditions where the soling material becomes contaminated, wearers should always check the antistatic properties of the footwear before entering a hazard area.

Where antistatic footwear is in use, the resistance of the flooring should be such that it does not invalidate the protection provided by the footwear.

It is recommended to use an antistatic sock. It is, therefore, necessary to ensure, that the combination of the footwear its wearers and their environment is capable, to fulfil the designed function of dissipating electrostatic charges, and of giving some protection during its entire life. Thus, it is recommended, that the user establish an in-house test for electrical resistance, which is carried out at regular and frequent intervals."

8.4, 3rd paragraph

Delete the "S" in "O1PS", to read as follows:

"**Metal (e.g. O1P, O3):** Is less affected by the shape of the sharp object/hazard (i.e. diameter, geometry, sharpness) but due to shoemaking techniques may not cover the entire lower area of the foot."