

DRAFT AMENDMENT NO. 2 NOVEMBER 2023

TO

IS 3976 : 2018 SAFETY RUBBER CANVAS BOOTS FOR MINERS — SPECIFICATION

(Page 2, clause 5.1) —Substitute the following for existing:

5.1 Design

The Boots of type 1 and Type 2 are recommended to have typical design as shown in Fig 1 and Fig 2 respectively. The Boots shall have a toe spring of 19 mm +/-1mm.

(Page 4, clause 5.2.5.2, Table 2, See Also Amendment no. 1) — Substitute the following for existing:

Table 2 Physical Requirements for Compact Sole

(Clause 5.2.5.2)

SI No	Characteristics	Requirement	Method of Test, Ref. to IS
(1)	(2)	(3)	(4)
i)	Hardness (IRHD)	75 ± 5	3400 (Part 2)
ii)	Change in hardness after Accelerated ageing at 100 ± 2 °C for 24 h(for rubber components)	+5 -2	3400 (Part 4)

(Page 4, Clause 5.2.8, See Also Amendment no. 1) — Substitute the following for existing:

5.2.8 Safety toe Caps

5.2.8.1 General

Metallic or non-metallic toecaps shall be incorporated in the Type 1 and Type 2 footwear in such a manner that they cannot be removed without damaging the footwear. In addition, the toecaps shall have coverings extending over their edge, from the back edge of the toecap to at least 5 mm beneath it and at least 10 mm in the opposite direction. Scuff resistant coverings for the toe region shall not be less than 1 mm in thickness.

5.2.8.2 Internal length of toecap

When measured in accordance with the method described in IS 15298 (Part 1), the internal toecap length shall fulfil the requirements of Internal length of toecap as prescribed in IS 15298 (Part 2).

5.2.8.3 Corrosion resistance

Both before and after testing in accordance with the method described in Annex-E of IS 5852(Part 1), metallic toecaps shall exhibit not more than three areas of corrosion, none of which shall measure more than 2 mm in any direction.

(Page 4, clause 5.2.9, See Also Amendment no. 1) — Insert the following new clauses after 5.2.9.4

5.2.9.5 Breaking load and tag retention

The minimum breaking load of the laces shall be 400 N when tested as per the method given in Annex C. The minimum tag retention load shall be 140 N when tested as per the method given in Annex C.

5.2.9.6 *Abrasion Resistance*

5.2.9.6.1 *Lace to lace*

Laces shall withstand minimum 5 000 cycles without breaking when tested for lace to lace abrasion using Method 1 of IS8085(Part 17).

5.2.9.6.2 *Lace to eyelet*

Laces shall withstand minimum 5 000 cycles without breaking when tested for lace to eyelet abrasion using Method 3 of IS8085(Part 17).

(Page 4, clause **5.2.10**, See Also Amendment no. 1) — Substitute the following for existing:

5.2.10 *Eyelets*

Eyelets shall be made of aluminium, brass or plastic coated aluminium and shall have minimum collar diameter of 4 mm. 5 to 8 male and female eyelets may be clenched. The minimum force required to pull out the eyelets from the upper shall be 250 N, when tested as per the method given in Annex B of IS 17861:2022.

(Page 4, clause **5.2.11**, See Also Amendment no.1) — Insert the following new clause after **5.2.11**:

5.2.12 *Insole*

5.2.12.1 *Material and thickness*

The insole shall be made of non-woven textile or cotton or blend of polyester and cotton. When determined in accordance with IS 15298 (Part 1), the thickness of the insole shall be minimum 2.0 mm.

NOTE — For boots having penetration resistance, the perforation resistant insert is the insole and it shall conform to requirements of perforation resistant insert prescribed in IS 17275 (Part 1) or IS 17275 (Part 2).

5.2.12.2 *Abrasion Resistance*

When insoles are tested in accordance with IS 15298 (Part 1), the abrasion damage shall not be more severe than that illustrated by the reference test pieces for the same family of materials before 400 cycles.

5.2.12.3 *Water absorption and desorption*

When tested in accordance with IS 15298 (Part 1), the water absorption shall be not less than 70 mg/cm² and the water desorption shall be not less than 80 percent of the water absorbed.

(Page 4, clause **5.3.1**, See Also Amendment no. 1) — Add the following at the end of last sentence:

Insole to be strobil stitched with upper for mounting on last before moulding.

(Page 5, clause **5.3.7**, second sentence, See Also Amendment no. 1) — Substitute the following for existing:

One pair of detachable in socks, having minimum thickness of 2 mm, with arch support shall be provided with each pair of boots.