



PRODUCT MANUAL FOR INDUSTRIAL SAFETY HELMETS ACCORDING TO IS 2925: 1984

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

| | | | |
|----|--|--|--|
| 1. | Product | : | IS 2925 : 1984 |
| | Title | : | INDUSTRIAL SAFETY HELMETS |
| | No. of Amendments | : | 4 |
| 2. | Sampling Guidelines: | | |
| a) | Raw material | : | Material - As per clause 3 of IS 2925 |
| b) | Grouping guidelines | : | Please refer ANNEX – A |
| c) | Sample Size | : | 10 nos for all tests |
| 3. | List of Test Equipment | : | Please refer ANNEX – B |
| 4. | Scheme of Inspection and Testing | : | Please refer ANNEX – C |
| 5. | Possible tests in a day : | | |
| | (i) Sizes (clause 4) (ii) Construction (Clause 5) (iii) Workmanship and finish (Clause 6) (iv) Mass (Clause 7) (v) Shock absorption test (Clause 8.1) (vi) Penetration resistance (Clause 8.2) (vii) Flammability resistance (Clause 8.3) (viii) Heat resistance (Clause 8.6) | | |
| 6. | Scope of the Licence : | | |
| | “Licence is granted to use Standard Mark as per IS 2925 : 1984 with the following scope: | | |
| | Name of the product | INDUSTRIAL SAFETY HELMETS | |
| | Size/Range | Sizes 520/530/540/550/560/570/580/590/600 mm or Size Range (as applicable) | |

ANNEX A

Grouping Guidelines

1. Industry Safety Helmets are classified as given below:
Sizes 520, 530, 540, 550, 560, 570, 580, 590 and 600 mm or Size Range (as applicable)
2. Considering the above, Industry Safety Helmets of each size shall be tested for all requirements to cover that particular size tested.
3. For Helmets with size adjustment range, consideration shall be given to the smallest and highest size of the adjustment range for measurements and the middle size for all other tests to cover that particular size range tested.
4. The Firm shall declare the sizes/size range of Helmets intended to be covered
5. in the Licence. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
6. During the operation of the Licence, BO shall ensure that all the types and sizes covered in the Licence are tested in rotation, to the extent possible.

ANNEX B**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

| SI No. | Tests used in with Clause Reference | Test Equipment |
|--------|--|---|
| 1. | Corrosion of metal parts (clause 3.3) | Spraying arrangement, Salt solution Air conditioner |
| 2. | Sizes (Clause 4) | Head form or Fixed ring gauge / expanding gauge |
| 3. | Construction (Clause 5) | Vernier calliper Steel scale Plug gauge Outside micrometre S-hook and 10 kg load 2.25 kg mass |
| 4. | Mass (Clause 7) | Weighing balance |
| 5. | Shock absorption resistance (Clause 8.1) | Striker weighing 3 kg Striking face: 180 X 180 mm Apparatus for measuring force/ Load Shell Measuring Cylinder Glass Thermometer Concrete Block to support the gauge and Head Form Deep Freezer |
| 6. | Penetration resistance (Clause 8.2) | Arrangement for Penetration Resistance Test Plumb bob of 500 g mass & included angle 36 ° Measuring Tape Micrometer |
| 7. | Flammability resistance (Clause 8.3) | Arrangement for Flammability Resistance Test Copper Wire 0.71 mm diameter Burner Stop watch |
| 8. | Electrical resistance (Clause 8.4) | Arrangement for Electrical Resistance Test Voltmeter Milli Amp meter Air Conditioner Water bath with temperature control |
| 9 | Water Absorption (Clause 8.5) | Weighing balance Water bath with temperature control Air conditioner |
| 10 | Heat resistance test (Clause 8.6) | Hot air oven |

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

Scheme of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 2925: 1984.

4. CONTROL UNIT – All helmets of the same size/size range manufactured from same material in one day shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of [Table 1](#) and the levels of control in column 3 of [Table 1](#), shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

| (1) | | | | (2) | (3) | | |
|--------------|-----------------------------|---------------------|-----------|---|-------------------|-------------------|---------|
| Test Details | | | | Test equipment requirement R: required (or) S: Sub-contracting permitted | Levels of Control | | |
| Cl. | Requirement | Test Methods | | | No. of Sample | Frequency | Remarks |
| | | Clause | Reference | | | | |
| 3.1 | Shell | 3.1 | IS 2925 | R | All | - | - |
| 3.2 | Harness | 3.2 | IS 2925 | - | All | - | - |
| 3.3 | Metal parts | 3.3 and Appendix -B | IS 2925 | R | 1 | Each consignment | - |
| 4 | Sizes | 4 | IS 2925 | R | 5 | Each control unit | - |
| 5 | Construction | 5.1 to 5.5 | IS 2925 | R | 5 | Each control unit | - |
| 6 | Workmanship and finish | 6.1 | IS 2925 | - | All | - | - |
| 7 | Mass | 7.1 | IS 2925 | R | 5 | Each control unit | - |
| 8.1 | Shock absorption resistance | 8.1 and Appendix- E | IS 2925 | R | 3 | Once a Week | # |
| 8.2 | Penetration resistance | 8.2 and Appendix- F | IS 2925 | R | 1 | Once a Week | |
| 8.3 | Flammability resistance | 8.3 and Appendix- G | IS 2925 | R | 1 | Once a Week | |
| 8.4 | Electrical Resistance | 8.4 and Appendix- H | IS 2925 | R | 1 | Once a Week | |
| 8.5 | Water Absorption | 8.5 and Appendix- J | IS 2925 | R | 1 | Once a Week | |
| 8.6 | Heat resistance | 8.6 and Appendix- K | IS 2925 | R | 1 | Once a Week | |

In case of failure of any sample, twice the number of samples from the same lot shall be tested. The lot shall be accepted only if retested samples pass.

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are obligatory in nature to which the licensee shall comply with.