

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

(Not to be reproduced without permission of BIS or used as an Indian Standard)

भारतीय मानक मसौदा
नेत्रहीनों के लिए छड़ी – विशिष्टि
भाग 1 सख्त, लम्बी और सफेद
(IS 11646 (Part 1): 2003 का दूसरा पुनरीक्षण)

Draft Indian Standard

Cane for Visually Handicapped — Specification
Part 1 Rigid, Long and White
(Second revision of IS 11646 (Part 1): 2003)

ICS 11.180.30

Artificial Limbs, Rehabilitation Appliances and
Equipment for the Persons with Disability
Sectional Committee, MHD 09

Last date for comments: **02 July 2024**

FOREWORD

(Formal clauses will be added later)

This standard was originally published in 1986. At that time considerable assistance was provided by National Association for the Blind, Mumbai for preparation of this standard. The first revision of this standard had been published in 2003 to bring the standard line with the manufacturing practices prevailing in the country at the time. Some of the dimensions, corresponding material and requirements had also been modified.

The second revision has been brought out to align the standard with the latest style and format of Indian Standards. Also, cross-references to Indian Standards have been updated.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2: 2022 'Rules for Rounding Off Numerical Values (*second revision*)'. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

1 SCOPE

This standard (Part 1) covers dimensional and other requirements for rigid, white and long cane used as a probing device for the purpose of mobility by blind persons.

2 REFERENCES

The following standards contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	Title
IS 151: 2017	Ready mixed paint, spraying, finishing, stoving, enamel for general purposes, colour as required – Specification (<i>second revision</i>)
IS 7078: 1973	Specification for plastics used in instrument industry
IS 13607: 1992	Ready mixed paint, finishing, general purposes, synthetic – Specification

3 MATERIAL

3.1 Shaft/Tube

The shaft/tube shall be made of aluminium alloy drawn tube or seasoned timber, sawn along the grains, parallel to the annual rings, free from knots, decay, insect bite and termite attack.

3.2 Grip

Grip shall be made of rubber, plastic, nylon or timber, having slight roughness and non-absorbent of heat and moisture.

3.3 Tip

Tip shall be made of nylon, plastic, steel or any other suitable material. It shall be detachable from the shaft. Tip shall be capable of giving auditory impulse.

3.4 Coating

The cane may be spray or brush painted with a paint conforming to IS 13607 or IS 151. Alternatively, it may be PVC coated. Coating shall be such that it shall not scrape or chip. The cane finish shall be elegant and reflective. The cane may also be provided with a fluorescent coating which can give spellings in darkness.

3.5 Inner Element

Elastic with single cord or wrapped, plastics or nylon cord if required.

4 SHAPES AND DIMENSIONS

The shape of cane is shown in Fig. 1. The total length of cane may vary from 1010 to 1370 mm according to the height of the persons using it. However, the preferable lengths are 1050, 1100, 1200 and 1300 mm.

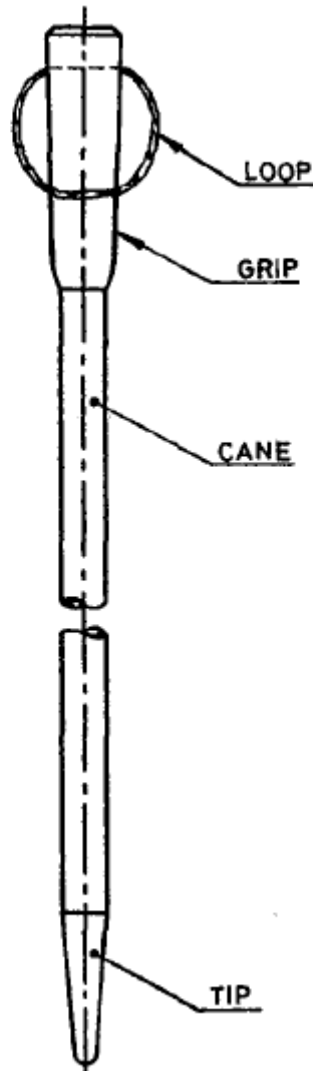


FIG. 1 CANE, RIGID AND LONG

5 CONSTRUCTION

5.1 Shaft

The shaft shall be made of tube of high tensile strength and ductility. The wall thickness of the tube shall be 1.0 mm, minimum and the outside diameter 19.0 mm. An alternative round, hollow cross-section of equal strength may also be used. In case of timber shaft, it shall be solid. The top portion may be white coated and the bottom 250 mm may be painted red. Alternatively, it may be PVC sleeved.

5.2 Grip

The grip may preferably be made of timber, plastic or rubber compound. It may be moulded as shown in Fig. 1. The moulded grip shall have broader end at the top and shall gradually taper at the lower end. The grip shall have flat surface in one of the segments and the remaining portion may have a few (2 or 3) serrations for better grip. The weight of the grip shall be between 70 to 90 g and the length between 200-230 mm. The grip shall be fixed on one end of the shaft with a strong adhesive (preferably, if it is an integral part of the cane). The grip may have elastic or leather loop for handle at a distance of 12 mm from the top end, 225-250 mm perimeter passing through the hole.

5.3 Tip

The tip shall be made from suitable plastics as applicable to plastics for gear specified in IS 7078 or any other material having property of good auditory impulse. The length of the tip outside the cane shall be 30 to 50 mm. The tip may have a peg hole at one end which may be fixed into the other end of the shaft by either inserting or screwing it into the tube. The diameter of the tip shall be 12.5 mm minimum and may be half round at the bottom.

6 WORKMANSHIP AND FINISH

The functioning of the cane shall be smooth. Sharp points, roughness and projections shall be avoided.

7 MARKING

7.1 Each cane shall be marked with the manufacturer's name, initials or recognized trade-mark and with the total length of the cane below the grip.

7.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed there under, and the product(s) may be marked with the Standard Mark.

8 PACKING

The packing shall be as agreed to between the purchaser and the manufacturer.