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मानक

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“Step Out From the Old to the New”

IS 10124-7 (2009): Fabricated PVC-U Fittings for Potable Water Supplies - Specification, Part 7: Specific Requirements for Threaded Adaptors [CED 50: Plastic Piping System]



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Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrihari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
पेय जल आपूर्ति के लिए सविरंचित
पी वी सी-यू फिटिंगें — विशिष्ट
भाग 7 चूड़ीदार अडेप्टरों की विशिष्ट अपेक्षाएँ
(दूसरा पुनरीक्षण)

Indian Standard
FABRICATED PVC-U FITTINGS FOR POTABLE WATER
SUPPLIES — SPECIFICATION
PART 7 SPECIFIC REQUIREMENTS FOR THREADED ADAPTORS
(*Second Revision*)

ICS 23.040.45; 91.140.60

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NEW DELHI 110002

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Price Group 2

FOREWORD

This Indian Standard (Part 7) (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Plastics Piping Systems Sectional Committee had been approved by the Civil Engineering Division Council.

This standard was first published in 1982 and revised in 1988. In this revision, sizes and classes of fittings have been aligned with IS 4985 : 2000 'Unplasticized PVC pipes for potable water supplies — Specification'.

The requirements of fabricated PVC-U fittings are covered in thirteen parts. The other parts in the series are:

- Part 1 General requirements
- Part 2 Specific requirements for sockets
- Part 3 Specific requirements for straight reducers
- Part 4 Specific requirements for caps
- Part 5 Specific requirements for equal tees
- Part 6 Specific requirements for flanged tail pieces with metallic flanges
- Part 8 Specific requirements for 90° bends
- Part 9 Specific requirements for 60° bends
- Part 10 Specific requirements for 45° bends
- Part 11 Specific requirements for 30° bends
- Part 12 Specific requirements for 22 ½° bends
- Part 13 Specific requirements for 11 ¼° bends

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

FABRICATED PVC-U FITTINGS FOR POTABLE WATER SUPPLIES — SPECIFICATION

PART 7 SPECIFIC REQUIREMENTS FOR THREADED ADAPTORS

(*Second Revision*)

1 SCOPE

This standard (Part 7) lays down the requirements for manufacture, dimensions and marking for fabricated PVC-U threaded adaptors for potable water supplies.

2 REFERENCES

The standards listed below 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 agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
554 : 1999	Pipe threads where pressure tight joints are made on the threads — Dimensions, tolerances and designation (<i>fourth revision</i>)
4985 : 2000	Unplasticized PVC pipes for potable water supplies — Specification (<i>third revision</i>)
10124 (Part 1) : 2009	Specification for fabricated PVC-U fittings for potable water supplies — Specification: Part 1 General requirements

3 REQUIREMENTS**3.1 General**

The general requirements for material, sizes, tests, sampling and criteria for conformity shall conform to IS 10124 (Part 1).

3.2 Materials

The pipes used for the manufacture of threaded adaptors shall conform to all the requirements of IS 4985 except for the dimension, and the manufacture shall provide necessary assurance or guarantee that the pipes used by them fulfill all other requirements specified in IS 4985.

3.3 Manufacture

3.3.1 Typical illustrations of threaded adaptors are shown in Fig. 1.

3.3.2 Dimensions

The dimensions of threaded adaptors shall comply with those given in Table 1 read with Fig. 1

3.3.3 The threaded adaptors may either be plain ended or socketed as agreed to between the manufacturer and the purchaser. In case of socketed threaded adaptors, the socket measurement shall comply with IS 10124 (Part 1).

NOTES

1 Threaded adaptors for sizes 125 mm and above are not generally recommended.

2 For 0.25 MPa and 0.4 MPa pressure classes, threaded adaptors should not be made from 0.25 MPa and 0.4 MPa pressure class pipes. For these threaded adaptors made from 0.6 MPa pressure class should be used.

4 MARKING

4.1 Each threaded adaptor shall be clearly and indelibly marked with the following information:

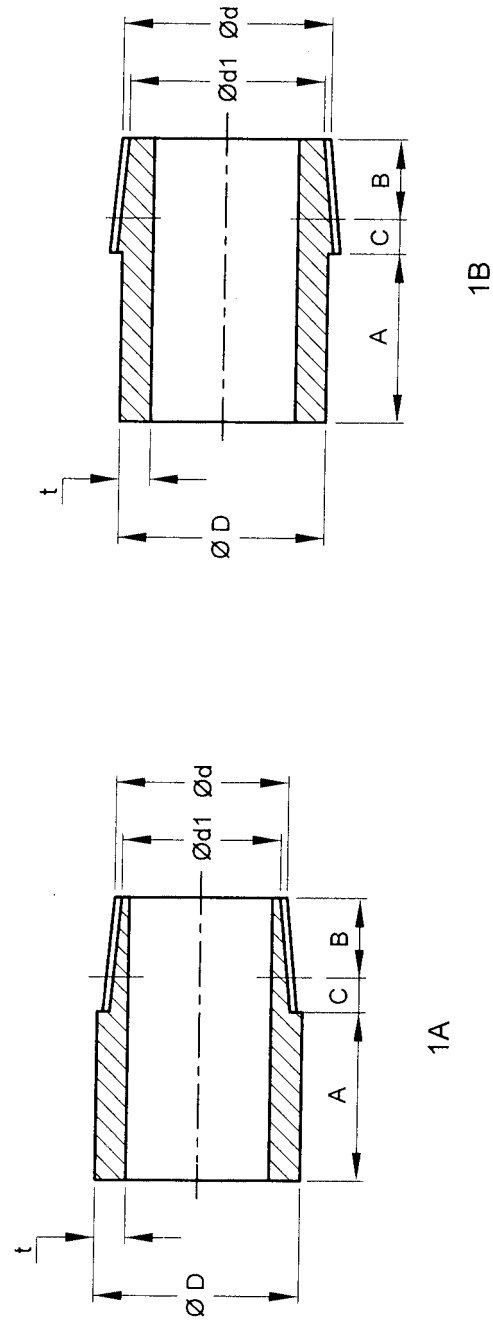
- a) Manufacture's name or identification mark,
- b) Size of the threaded adaptors and the appropriate class (working pressure) of IS 4985 to which the pressure rating of the fitting corresponds, and
- c) Threaded adaptors shall be marked in colour as indicated below for different classes of fittings:

<i>Class of the Fittings</i>	<i>Colour</i>
Class 3 (0.6 MPa)	Green
Class 4 (0.8 MPa)	Brown
Class 5 (1.0 MPa)	Yellow
Class 6 (1.25 MPa)	Black

4.2 BIS Certification Marking

Each threaded adaptor may also be marked with the Standard Mark.

4.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and the Rules and Regulations made thereunder. The details of conditions under which a licence for the use of the Standard Mark may be granted to the manufacturer or producer may be obtained from the Bureau of Indian Standards.



NOTE — The drawings are only intended to define the terms used in Table 1 and are not intended to illustrate specific design features.

FIG. 1 THREADED ADAPTORS

Table 1 Dimensions of Threaded Adaptors
(Clauses 3.3.1 and 3.3.2)

All dimensions in millimetres.

Sl No.	Nominal Size	Outside Diameter at Plains Portion of Threaded Adaptor Dia D	Length of Plain Portion of Threaded Adaptor	Thickness at Plain Portion of Threaded Adaptor t	Thread Dimensions			Length of Useful Thread (For Basic Gauge) B	Fitting Allowance C (Approx)	Dimension of Pipe Required for Making Threaded Adaptor			Reference Figure					
		$\begin{Bmatrix} Min & Max \end{Bmatrix}$		$\begin{Bmatrix} \text{Class 3} & 0.6 \text{ MPa} & \text{Class 5} & 1.0 \text{ MPa} \end{Bmatrix}$	Designation of Thread	Pitch	Diameter at Gauge Plane (Basic)	Length Min		$\begin{Bmatrix} Outside Diameter & Wall Thickness \end{Bmatrix}$								
							$\begin{Bmatrix} Major diameter & Pitch diameter & Minor diameter \end{Bmatrix}$			$\begin{Bmatrix} Min & Max \end{Bmatrix}$	$\begin{Bmatrix} \text{Class 3} & 0.6 \text{ MPa} & \text{Class 5} & 1.0 \text{ MPa} \end{Bmatrix}$							
							$\begin{Bmatrix} d & d_2 & d_1 \end{Bmatrix}$											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
i)	63	63.0	63.3	68.0	5.5	6.8	2	2.309	59.614	58.135	56.656	23.4	7.5	63.0	63.3	5.6	6.9	1A
ii)	75	75.0	75.3	74.0	4.1	5.7	2 ½	2.309	75.184	73.705	72.226	26.7	9.2	75.0	75.3	4.2	5.8	1A
iii)	90	90.0	90.3	86.0	5.7	7.6	3	2.309	87.884	86.405	84.926	29.8	9.2	90.0	90.3	5.8	7.7	1A
iv)	110	110.0	110.4	106.0	3.8	6.2	4	2.309	113.030	111.551	110.072	35.8	10.4	114.1	114.5	6.0	8.4	1B

NOTES

1 The value D are in accordance with IS 4985.

2 The values of t are chosen in such a way that after machining and/or threading, the minimum thickness at the root of the thread is not less than the minimum thickness specified in IS 4985 for the appropriate size and pressure class.

3 The thread dimension indicated in the table conform to the requirements of taper external thread specified in IS 554.

4 The dimension of the pipes given under col 15, 16, 17 and 18 are only meant to provide guidance to the manufacturers to enable them to manufacture the threaded adaptors meeting the other requirements of Table 1.

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Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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