

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY
*(Not to be reproduced without permission of BIS
or used as an Indian Standard)*

Draft Indian Standard

**THERMOPLASTICS HOSES (TEXTILE REINFORCED) FOR COMPRESSED AIR—
SPECIFICATION**
(Second Revision of IS 12492)

(ICS 23.040.70)

Rubber and Rubber Products Sectional Committee,
PCD 13

Last date for comment
09 April 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This standard was first published in 1988 for which assistance was derived from ISO 5774 and subsequently revised in 2023 aligning it with 2016 version of ISO 5774 standard.

Thermoplastics hoses are being used and manufactured not only in developed countries but even in India. Depending upon the usage, both rubber and plastics hoses have their comparative advantages and weak points. However, once the choice to use thermoplastic hose has been exercised, it is important to stipulate the parameters to be tested and also prescribe the most acceptable requirements. Taking cognizance of these changes and developments, it was decided to formulate a standard for thermoplastic hoses.

The second revision has been undertaken to align it with the latest version of ISO 5774 : 2023 in dual numbering system to make pace with latest developments that have taken place at international level.

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions and terminologies are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current

practice is to use a point (.) as the decimal marker.

In this adopted standard reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

International Standard	Corresponding Indian Standard	Degree of Equivalence
ISO 37, Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties	IS 3400 (Part 1) : 2021/ ISO 37 : 2017 Methods of test for vulcanized rubber : Part 1 Determination of tensile stress-strain properties (fourth revision)	Identical
ISO 105-A02, Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour	IS/ISO 105-A02 :1993 Textiles — Tests for colour fastness Part A02 Grey scale for Assessing change in colour	Identical
ISO 176, Plastics — Determination of loss of plasticizers — Activated carbon method	IS 13360 (Part 8/Sec 4) : 2018 ISO 176 : 2005 Plastics — Methods of Testing Part 8 Permanece/Chemical Properties Section 4 Determination of loss of plasticizers — Activated carbon method (First Revision)	Identical
ISO 188:2011, Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests	IS 3400 (Part 4) : 2012 /ISO 188 : 2011 Methods of test for vulcanized rubber : Part 4 Accelerated ageing and heat resistance (third revision)	Identical
ISO 1307, Rubber and plastics hoses — Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses	IS 15933 : 2011/ ISO 1307 : 2006 Rubber and plastics hoses — Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses	Identical
ISO 1402, Rubber and plastics hoses and hose assemblies — Hydrostatic testing	IS 443 (Part 3) : 2023 / ISO 1402 : 2021 Methods of Test for Rubber and Plastics — Tubing, Hoses and Hose Assemblies Part 3 Rubber and	Identical

	Plastics Hoses and Hose Assemblies — Hydrostatic Testing (Fourth Revision)	
ISO 1817, Rubber, vulcanized or thermoplastic — Determination of the effect of liquids	IS 3400 (Part 6) : 2018/ISO 1817 : 2015 Methods of Test for Vulcanized Rubbers Part 6 Determination of the Effect of Liquids (<i>fourth revision</i>)	Identical
ISO 4671, Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies	IS 443 (Part 8) : 2023 / ISO 4671 : 2022 Methods of Test for Rubber and Plastics — Tubing, Hoses and Hose Assemblies Part 8 Rubber and Plastics Hoses and Hose Assemblies — Methods of Measurement of the Dimensions of Hoses and the Lengths of Hose Assemblies	Identical
ISO 8033, Rubber and plastics hoses — Determination of adhesion between components	IS 3400 (Part 24) : 2012 / ISO 8033 : 2016 Methods of test for vulcanized rubber : Part 24 Rubber and plastics hose — Determination of adhesion between components (first revision)	Identical
ISO 8330, Rubber and plastics hoses and hose assemblies — Vocabulary	IS 16204 : 2014/ ISO 8330 : 2022 Rubber and plastics hoses and hose assemblies — Vocabulary	Identical
ISO 10619-1, Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature	IS 443 (Part 10) : 2023 / ISO 10619-1 : 2017 Methods of Test for Rubber and Plastics — Tubing, Hoses and Hose Assemblies Part 10 Rubber and Plastics Hoses and Tubing — Measurement of Flexibility and Stiffness — Bending Tests at Ambient Temperature	Identical
ISO 10619-2, Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 2: Bending tests at sub-ambient temperatures	IS 443 (Part 11) : 2023 /ISO 10619-2 : 2021 Methods of Test for Rubber and Plastics — Tubing, Hoses and Hose Assemblies Part 11 Rubber and Plastics Hoses and Tubing	Identical

	— Measurement of Flexibility and Stiffness — Bending Tests at Sub-Ambient Temperatures	
--	--	--

The technical committee has reviewed the provisions of the following Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard:

<i>Standard</i>	<i>Title</i>
ISO 30013	Rubber and plastics hoses — Methods of exposure to laboratory light sources — Determination of changes in colour, appearance and other physical properties

This standard also makes a reference to the BIS Certification Marking of the product. Details of which are given in National Annex A.

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 the same as that of the specified value in this standard.

NOTE — The technical content of the document is not available on website. For details, please refer the corresponding ISO 5774:2023 or kindly contact:

Ms. Meenal Passi
Scientist ‘F’ & Head (PCD)
Petroleum & Coal related products Department (PCD)
Bureau of Indian Standards 9, B.S. Zafar Marg, New Delhi-110002
Email: pcd@bis.gov.in, pcd13@bis.gov.in
Telephone: 011-23235432

National Annex A
(National Foreword)

A-1 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 thereunder, and the products may be marked with the standard mark.