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Plastics hoses — Textile-reinforced types for compressed-air applications — Specification

Tuyaux en plastique — Types armés de textile pour applications avec de l'air comprimé — Spécifications

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

This fourth edition cancels and replaces the third edition (ISO 5774:2006), of which it constitutes a minor revision.

The minor changes are as follows:

— Clause 2 has been updated: ISO 1746, ISO 4672 and ISO 11758 have been deleted and replaced by ISO 10619-1, 10619-2 and ISO 30013.

— Pressures have been specified in MPa and bar (with the units stated) and Table 5 has been amended accordingly. Also Clause 10 (Marking) has been slightly modified to make the information more complete.

— The term "type approval" has been replaced by "type test".

— The error in Annex B, where, in the column "routine testing", the proof pressure test was marked N.A. has been corrected. Proof pressure testing for each length of finished hose supplied has become normative as standard for nearly all other hose product standards.

— Also Annex C (informative) has been amended (this annex is for guidance only) and the recommendation for production acceptance testing on tensile strength/elongation at break of lining and cover, change in length and diameter at proof pressure, adhesion, bending test has been changed from "N.A." to "X", in order to monitor the quality of manufacturer's production more efficiently.

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Introduction

This International Standard has been prepared to provide minimum acceptable requirements for the satisfactory performance of flexible thermoplastics hoses, textile reinforced, for compressed-air applications.

Maximum working pressures of each hose type are specified with two operating temperatures.

Some hose materials will require a hydrolysis test (given in Annex A).

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Plastics hoses — Textile-reinforced types for compressed-air applications — Specification

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1 Scope

This International Standard specifies the requirements for four types of flexible thermoplastic hose, textile reinforced, for compressed-air applications in the temperature range from –10 °C to +60 °C.

The four types are classified as light service for a maximum working pressure of 7 bar at 23 °C and 4,5 bar at 60 °C, medium service for a maximum working pressure of 10 bar at 23 °C and 6,5 bar at 60 °C, heavy service for a maximum working pressure of 16 bar at 23 °C and 11 bar at 60 °C, and heavy service for use in mining for a maximum working pressure of 25 bar at 23 °C and 13 bar at 60 °C.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37, *Rubber, vulcanized or thermoplastic — Determination of tensile stress-strain properties*

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 176:2005, *Plastics — Determination of loss of plasticizers — Activated carbon method*

ISO 188, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1307, *Rubber and plastics hoses — Hose sizes, minimum and maximum inside diameters, and tolerances on cut-to-length hoses*

ISO 1402, *Rubber and plastics hoses and hose assemblies — Hydrostatic testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 4671, *Rubber and plastics hoses and hose assemblies — Methods of measurement of the dimensions of hoses and the lengths of hose assemblies*

ISO 8033, *Rubber and plastics hoses — Determination of adhesion between components*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO 8331, *Rubber and plastics hoses and hose assemblies — Guide to selection, storage, use and maintenance*

ISO 10619-1, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

ISO 10619-2:2011, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 2: Bending tests at sub-ambient temperatures*

ISO 30013, *Rubber and plastics hoses — Methods of exposure to laboratory light sources — Determination of changes in colour, appearance and other physical properties*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

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