INTERNATIONAL **STANDARD**

ISO 7628-2

> First edition 1998-08-15

Road vehicles — Thermoplastics tubing for air braking systems —

Part 2:

Mounting on vehicle and test methods

Véhicules routiers — Tuyauteries thermoplastiques pour dispositifs de ns de mor. freinage pneumatique —

Partie 2: Conditions de montage sur le véhicule et méthodes d'essai



ISO 7628-2:1998(E)

C	Contents	Page
1	Scope	1
2	Normative references	. 1
3	Definitions	
4	Materials	
_	Installation on the vehicle	
5		
	5.1 Use of tube assemblies on the vehicle	
	5.2 Installation precautions	. 3
6	3	
7	Test procedure and requirements	. 4
	7.1 Quality and surface appearance	. 4
	7.2 Burst test	
	7.3 Deformation under pressure	. 5
	7.4 Cold impact test	
	7.5 Impact test after heat ageing	
	7.6 Moisture absorption	
	7.7 Low temperature flexural test	
	7.8 High temperature flexural test	
	7.10 Resistance to ethanol	
	7.11 Resistance to battery acid	
	7.12 Resistance to oil	
	7.13 Burning rate	
	7.14 Artificial weathering test	
A	nnex A (normative): Characteristics of the appropriate PA11, PA12 and TEEE materials	. 11
A	nnex B (normative): Alternative method for leak detection in leak-proof testing	14
Α.		
A	nnex C (normative): Cold impact apparatus	produced
©	ISO 1998	
or	rights reserved. Unless otherwise specified, no part of this publication may be reputilized in any form or by any means, electronic or mechanical, including photocopy crofilm, without permission in writing from the publisher.	oroduced ying and
	International Organization for Standardization Case postale 56 ◆ CH-1211 Genève 20 ◆ Switzerland Internet iso@iso.ch	
D.::	inted in Cuitzerland	

© ISO 1998

Printed in Switzerland

Anı	nex E (informative): Synopsis of test and corresponding samples
	nex F (informative): Bibliography
Ó.	
3	
0,	
	CZ.
	`

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 7628-2 was prepared by technical committee ISO/TC 22, *Road vehicles*, Subcommittee SC 2, *Braking systems and equipment*.

This first edition cancels and replaces ISO/TR 7628-2:1986, which has been technically revised.

ISO 7628 consists of the following parts, under the general title *Road* vehicles — Thermoplastics tubing for air braking systems:

- Part 1: Dimensions and marking
- Part 2: Mounting on vehicles and test methods

Annexes A, B, C and D form an integral part of this part of ISO 7628. Annexes E and F are for information only.

Road vehicles — Thermoplastics tubing for air braking systems — Part 2:

Mounting on vehicle and test methods

1 Scope

This part of ISO 7628 specifies the minimum requirements for tubing used in air braking systems, to allow its marking in accordance with ISO 7628-1. The conformity of production is the responsibility of the tubing manufacturer.

The marking of the tubing does not automatically imply that the tube assembly (i.e. tube with end-fittings) is appropriate to its use on a vehicle.

It is the responsibility of the tube assembler and/or the vehicle manufacturer to ensure that tests of annex D, relating to the tube assembly itself, are successfully performed.

The tubing defined in this part of ISO 7628 belongs to two possible categories:

- tubing for use up to a maximum working pressure of 1 000 kPa¹);
- tubing for use up to a maximum working pressure of 1 250 kPa¹;

and within a temperature range of $-40 \, ^{\circ}\text{C}^{2)}$ to $+100 \, ^{\circ}\text{C}$.

The requirements for coiled tube assemblies are specified in ISO 7375.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7628. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7628 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 179-1:—3), Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test.

ISO 307:1994, Plastics — Polyamides — Determination of viscosity number.

ISO 527-2:1993, Plastics — Determination of tensile properties — Part 2: Testing conditions for moulding and extrusion plastics.

¹⁾ $1 \text{ kPa} = 10^{-2} \text{ bar}$

²⁾ Reduction of the lower temperature limit will be considered during a future revision of this part of ISO 7628.

³⁾ To be published. (Revision of ISO 179:1993).

© ISO ISO 7628-2:1998(E)

ISO 1133:1997, Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics.

ISO 1183:1987, Plastics — Methods for determining the density and relative density of non-cellular plastics.

ISO 1874-1:1992, Plastics — Polyamide (PA) moulding and extrusion materials — Part 1: Designation.

ISO 1874-2:1995, Plastics — Polyamide (PA) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties.

ISO 2719:1988, Petroleum products and lubricants — Determination of flash point — Pensky-Martens closed cup method.

ISO 2977:1997, Petroleum products and hydrocarbon solvents — Determination of aniline point and mixed aniline point.

ISO 3104:1994, Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity.

ISO 3146:1985, Plastics — Determination of melting behaviour (melting temperature or melting range) of semicrystalline polymers.

ISO 3795:1989, Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials.

ISO 4080:1991, Rubber and plastics hoses and hose assemblies — Determination of permeability to gas.

ISO 4892-2:1994, Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc sources.

ISO 4892-4:1994, Plastics — Methods of exposure to laboratory light sources — Part 4: Open-flame carbon-arc lamps.

ISO 6427:1992, Plastics — Determination of matter extractable by organic solvents (conventional methods).

ISO 7628-1:1998, Road vehicles — Thermoplastic tubing for air braking systems — Part 1: Dimensions and marking.

ISO 14910-1:1997, Plastics — Thermoplastic polyester/ester and polyether/ester elastomers for moulding and extrusion — Part 1: Designation system and basis for specifications.

ISO 14910-2:1997, Plastics — Thermoplastic polyester/ester and polyether/ester elastomers for moulding and extrusion — Part 2: Preparation of test specimens and determination of properties.

3 Definitions

For the purposes of this part of ISO 7628, the following definitions apply.

3 1

tube

tubing which has been cut to its appropriate length

tube assembly

tube which has been equipped with suitable end fittings