

<b>STN</b>	<b>Rúrky z nehrdzavejúcej ocele na výrobu zdravotníckych pomôcok. Požiadavky a skúšobné metódy (ISO 9626: 2016).</b>	<b>STN EN ISO 9626</b>  85 6221
------------	--	---

Stainless steel needle tubing for the manufacture of medical devices - Requirements and test methods (ISO 9626:2016)

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/17

Obsahuje: EN ISO 9626:2016, ISO 9626:2016

Oznámením tejto normy sa ruší  
STN EN ISO 9626 (85 6221) z októbra 1997

**123975**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

**EN ISO 9626**

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2016

ICS 11.040.25

Supersedes EN ISO 9626:1995

English Version

## Stainless steel needle tubing for the manufacture of medical devices - Requirements and test methods (ISO 9626:2016)

Tubes d'aiguilles en acier inoxydable pour la  
fabrication de matériel médical - Exigences et  
méthodes d'essai (ISO 9626:2016)

Kanülenrohre aus nichtrostendem Stahl zur  
Herstellung von Medizinprodukten - Anforderungen  
und Prüfverfahren (ISO 9626:2016)

This European Standard was approved by CEN on 12 June 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
<b>European foreword.....</b>	<b>3</b>

## European foreword

This document (EN ISO 9626:2016) has been prepared by Technical Committee ISO/TC 84 "Devices for administration of medicinal products and catheters" in collaboration with Technical Committee CEN/TC 205 "Non-active medical devices" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9626:1995.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 9626:2016 has been approved by CEN as EN ISO 9626:2016 without any modification.

STN EN ISO 9626: 2017

# INTERNATIONAL STANDARD

# ISO 9626

Second edition  
2016-08-01

---

---

## **Stainless steel needle tubing for the manufacture of medical devices — Requirements and test methods**

*Tubes d'aiguilles en acier inoxydable pour la fabrication de matériel  
médical — Exigences et méthodes d'essai*



Reference number  
ISO 9626:2016(E)

© ISO 2016



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Materials</b> .....	<b>2</b>
<b>5 Requirements</b> .....	<b>2</b>
5.1 General.....	2
5.2 Surface finish and visual appearance.....	2
5.3 Cleanliness.....	2
5.4 Limits for acidity and alkalinity.....	2
5.5 Size designation.....	2
5.6 Dimensions.....	2
5.7 Sample size.....	5
5.8 Stiffness.....	5
5.9 Resistance to breakage.....	7
5.10 Resistance to corrosion.....	7
<b>Annex A (normative) Methods for preparation of extracts</b> .....	<b>8</b>
<b>Annex B (normative) Test method for stiffness of tubing</b> .....	<b>9</b>
<b>Annex C (normative) Test method for resistance of tubing to breakage</b> .....	<b>11</b>
<b>Annex D (normative) Test method for resistance to corrosion</b> .....	<b>13</b>
<b>Annex E (informative) Rationale with respect to test method for stiffness of tubing</b> .....	<b>14</b>
<b>Bibliography</b> .....	<b>23</b>

## 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](http://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](http://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 84, *Devices for administration of medicinal products and catheters*.

This second edition cancels and replaces the first edition (ISO 9626:1991), which has been technically revised. It also incorporates the Amendment ISO 9626:1991/Amd 1:2001.

The main changes to the previous edition of ISO 9626 introduced by this revision are the following:

- a) addition of specifications for stainless steel needle tubing for metric sizes 0,18 mm, 0,2 mm, 0,23 mm and 0,25 mm and to reflect the introduction of thinner tubing to allow greater comfort when injecting, particularly for infants and in paediatric use;
- b) addition of wall thickness designations beyond regular-walled and thin-walled tubing;
- c) addition of minimum inner diameters for additional items where possible;
- d) revision of the means of specifying the steels to be used;
- e) revision of the table of tubing dimensions and stiffness parameters.

[Annex A](#), [Annex B](#), [Annex C](#), [Annex D](#) and [Annex E](#) form an integral part of this International Standard.



## Introduction

Guidance on transition periods for implementing the requirements of this International Standard is given in ISO/TR 19244.



# Stainless steel needle tubing for the manufacture of medical devices — Requirements and test methods

## 1 Scope

This International Standard applies to rigid stainless steel needle tubing suitable for use in the manufacture of hypodermic needles and other medical devices primarily for human use.

This International Standard provides requirements and test methods for the tubes manufactured for needles as component used in medical devices. Additional performance testing on the tube aspect may be required when the component is incorporated in the ready-to-use device.

This International Standard specifies the dimensions and mechanical properties of steel tubing of designated metric sizes 3,4 mm (10 Gauge) to 0,18 mm (34 Gauge).

It does not apply to flexible stainless steel tubing because the mechanical properties differ from those specified for rigid tubing in this International Standard. However, manufacturers and purchasers of flexible tubing are encouraged to adopt the dimensional specifications given in this International Standard.

## 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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 15510, *Stainless steels — Chemical composition*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**