



SLOVENSKI STANDARD
oSIST prEN ISO 3861:2020
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Gumene cevi za peskanje - Specifikacija (ISO/DIS 3861:2020)

Rubber hoses for sand and grit blasting - Specification (ISO/DIS 3861:2020)

Gummischläuche zum Sandstrahlen - Anforderungen (ISO/DIS 3861:2020)

Tuyaux en caoutchouc pour sablage et grenailage - Spécifications (ISO/DIS 3861:2020)

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ICS:

83.140.40 Gumene cevi Hoses

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Rubber hoses and hose assemblies for sand and grit blasting — Specification

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ISO/DIS 3861:2020(E)

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).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee 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 3861:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Added MPa units throughout the document;
- Updated the Normative references;
- Added [clause 8](#) – Frequency of testing, and [Annex A](#) and [B](#);
- Updated [clause 9](#) – Marking.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document specifies rubber hoses for sand and grit blasting. When hoses are fitted with couplings, the document also contains requirements for hose assemblies.

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Rubber hoses and hose assemblies for sand and grit blasting — Specification

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate health and safety practices and to ensure compliance with any national regulatory conditions.

1 Scope

This document specifies the requirements for rubber hose and hose assemblies for wet and dry sand and grit blasting, suitable for use up to a maximum working pressure of 0,63 MPa (6,3 bar) and over an operating temperature range of -25 °C to $+70\text{ °C}$.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. 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 188:2011, *Rubber, vulcanized or thermoplastic — Accelerated ageing and heat resistance tests*

ISO 1307, *Rubber and plastics hoses for general-purpose industrial applications — Bore diameters and tolerances, and tolerances on length*

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

ISO 4649:2017, *Rubber, vulcanized or thermoplastic — Determination of abrasion resistance using a rotating cylindrical drum device*

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

ISO 7326:2016, *Rubber and plastics hoses — Assessment of ozone resistance under static conditions*

ISO 8031, *Rubber and plastics hoses and hose assemblies — Determination of electrical resistance and conductivity*

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

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

ISO 10619-1:2011, *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*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

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— IEC Electropedia: available at <https://www.electropedia.org/>

4 Classification

Hoses and hose assemblies are designated as one of the following grades depending on their electrical properties:

Electrically bonded — Designated and marked “M” grade.

Electrically conductive, using a conductive rubber layer — Designated and marked “Ω” grade.

5 Materials and construction

The hose shall consist of:

a rubber lining;

a reinforcement of natural or synthetic textile, applied by any suitable technique;

a rubber cover.

Depending on the grade, the construction may contain a conductive rubber layer or a bonding wire or wires consisting of at least nine strands of a metal having a high resistance to fatigue.

The lining and cover shall be of uniform thickness, concentric to comply with the minimum thickness specified in [clauses 6.2](#) and [6.4](#).

The lining and cover shall be free from holes, porosity and other defects. The cover finish may be smooth or fabric-marked.

6 Dimensions**6.1 Inside diameter and tolerances**

When measured in accordance with ISO 4671, the inside diameters and their tolerances shall conform to the values specified in [Table 1](#).

Table 1 — Inside diameters and tolerances

Inside diameter mm	Tolerance mm
12,5	± 0,75
16	± 0,75
19	± 0,75
20	± 0,75
25	± 1,25
31,5	± 1,25
38	± 1,50
40	± 1,50
45	± 1,50
50	± 1,50