Gas welding equipment - Rubber hoses for welding, cutting and allied processes (ISO 3821:2019, Corrected version 2021-05)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 3821:2019 sisaldab Euroopa standardi EN ISO 3821:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 3821:2019 consists of the English text of the European standard EN ISO 3821:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 25.09.2019.	Date of Availability of the European standard is 25.09.2019.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.160.30, 83.140.40

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 3821

September 2019

ICS 25.160.30; 83.140.40

Supersedes EN ISO 3821:2010

English Version

Gas welding equipment - Rubber hoses for welding, cutting and allied processes (ISO 3821:2019, Corrected version 2021-05)

Matériel de soudage aux gaz - Tuyaux souples en caoutchouc pour le soudage, le coupage et les techniques connexes (ISO 3821:2019, Version corrigée 2021-05)

Gasschweißgeräte - Gummischläuche für Schweißen, Schneiden und verwandte Prozesse (ISO 3821:2019, korrigierte Fassung 2021-05)

This European Standard was approved by CEN on 26 May 2019.

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 26 May 2021.

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

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Ref. No. EN ISO 3821:2019 E

European foreword

This document (EN ISO 3821:2019) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” 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 March 2020, and conflicting national standards shall be withdrawn at the latest by March 2020.

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

This document supersedes EN ISO 3821:2010.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 3821:2019, Corrected version 2021-05 has been approved by CEN as EN ISO 3821:2019 without any modification.

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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).

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

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 44, *Welding and allied processes*, Subcommittee SC 8, *Equipment for gas welding, cutting and allied processes.*

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.

Official interpretations of TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

This fifth edition cancels and replaces the fourth edition (ISO 3821:2008) which has been technically revised.

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

— the definition of maximum working pressure has been added;

— Clauses 7 to 9 have been revised;

— the requirements for marking have been revised;

— editorial changes have been made.

This corrected version of ISO 3821:2019 incorporates the following corrections:

— the publication year has been corrected from 2018 to 2019 on the cover page as well as in the headers and footers of the document.

Gas welding equipment — Rubber hoses for welding, cutting and allied processes

1 Scope

This document specifies requirements for rubber hoses (including twin hoses) for welding, cutting and allied processes.

This document specifies requirements for rubber hoses for normal duty of 2 MPa (20 bar) and light duty [limited to hoses for maximum working pressure of 1 MPa (10 bar) and with bore up to and including 6,3 mm].

This document applies to hoses operated at temperatures −20 °C to +60 °C and used in:

— gas welding and cutting;

— arc welding under the protection of an inert or active gas;

— processes allied to welding and cutting, in particular, heating, brazing, and metallization.

This document does not specify requirements for hose assemblies; these are detailed in ISO 8207.

This document applies neither to thermoplastics hoses nor to hoses used for high pressure [>0,15 MPa (>1,5 bar)] acetylene.

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

ISO 1307:2006, *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 10619-1, *Rubber and plastics hoses and tubing — Measurement of flexibility and stiffness — Part 1: Bending tests at ambient temperature*

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

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

ISO 4080, *Rubber and plastics hoses and hose assemblies — Determination of permeability to gas*

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

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

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

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

ISO 11114-3, *Gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 3: Autogenous ignition test for non-metallic materials in oxygen atmosphere*

ISO 15296, *Gas welding equipment — Vocabulary*

ISO 23529, *Rubber — General procedures for preparing and conditioning test pieces for physical test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 and ISO 15296 and the following 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

— IEC Electropedia: available at http://www.electropedia.org/

3.1
twin hose
two normal rubber hoses joined together longitudinally

3.2
universal fuel gas hose
hose which can be used for all fuel gases except fluxed fuel gas

Note 1 to entry: Fuel gases are listed in Table 5.

3.3
flux fuel gas hose
hose suitable for fuel gas containing a flux

3.4
maximum working pressure
maximum pressure to which the equipment may be subjected in service

4 Abbreviated terms

LPG liquefied petroleum gases

MPS methylacetylene-propadiene mixtures

5 Application

Hoses shall only be used for the gas service for which they are identified (see 10.2).

6 Hose designation

The hoses covered by this document are designated using the following information:

a) inside diameter, see Table 1;

b) light or normal duty (pressure rating), see Table 4;

c) colour and marking (gas service), see Table 5.