
Cevni sistemi iz polimernih materialov za oskrbo s plinastimi gorivi - Cevni sistemi iz nemehčanega poliamida (PA-U) z zvari in mehanskimi spoji - 1. del: Splošno (ISO 16486-1:2020)

Plastics piping systems for the supply of gaseous fuels - Unplasticized polyamide (PA-U) piping systems with fusion jointing and mechanical jointing - Part 1: General (ISO 16486-1:2020)

Kunststoff-Rohrleitungssysteme für die Gasversorgung - Rohrleitungssysteme aus weichmacherfreiem Polyamid (PA-U) mit Schweißverbindungen und mechanischen Verbindungen - Teil 1: Allgemeines (ISO 16486-1:2020)

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Systèmes de canalisations en matières plastiques pour la distribution de combustibles gazeux - Systèmes de canalisations en polyamide non plastifié (PA-U) avec assemblages par soudage et assemblages mécaniques - Partie 1: Généralités (ISO 16486-1:2020)

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ICS:

75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment
83.140.30	Polimerne cevi in fittingi za snovi, ki niso tekočine	Plastics pipes and fittings for non fluid use

SIST EN ISO 16486-1:2020**en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 16486-1

September 2020

ICS 75.200; 83.140.30

English Version

**Plastics piping systems for the supply of gaseous fuels -
Unplasticized polyamide (PA-U) piping systems with
fusion jointing and mechanical jointing - Part 1: General
(ISO 16486-1:2020)**

Systèmes de canalisations en matières plastiques pour
la distribution de combustibles gazeux - Systèmes de
canalisations en polyamide non plastifié (PA-U) avec
assemblages par soudage et assemblages mécaniques -
Partie 1 : Généralités (ISO 16486-1:2020)

Kunststoff-Rohrleitungssysteme für die Gasversorgung
- Rohrleitungssysteme aus weichmacherfreiem
Polyamid (PA-U) mit Schweißverbindungen und
mechanischen Verbindungen - Teil 1: Allgemeines (ISO
16486-1:2020)

This European Standard was approved by CEN on 14 August 2020.

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European foreword

This document (EN ISO 16486-1:2020) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems" the secretariat of which is held by NEN.

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 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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.

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The text of ISO 16486-1:2020 has been approved by CEN as EN ISO 16486-1:2020 without any modification.

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INTERNATIONAL
STANDARD

ISO
16486-1

Second edition
2020-08

**Plastics piping systems for the supply
of gaseous fuels — Unplasticized
polyamide (PA-U) piping systems
with fusion jointing and mechanical
jointing —**

Part 1:
General

iTeh STANDARD PREVIEW
(standards.iteh.ai)

*Systèmes de canalisations en matières plastiques pour la distribution
de combustibles gazeux — Systèmes de canalisations en polyamide
non plastifié (PA-U) avec assemblages par soudage et assemblages
mécaniques —*

Partie 1: Généralités



Reference number
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ISO 16486-1:2020(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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This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 4, *Plastics pipes and fittings for the supply of gaseous fuels*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 16486-1:2012), which has been technically revised. It also replaces ISO 16486-1:2012/Amd 1:2014.

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

- In subclause [5.2.5](#) characteristics include the need to saturate pipes for LTHS testing;
- In [Table 1](#) the Carbon black content is changed to (1,0 to 2,5) % (by mass);
- In [Table 2](#) former 6 hours has been changed to 16 hours for conditioning before hydrostatic strength testing in line with the phrasing in the table header;
- In subclause [5.2.6](#) change of compound refers to PPI TR-3 as guidance;
- A new informative [Annex D](#) – Continuous liquid hydrocarbon exposure from transported fluid or soil contamination – has been added;
- A new informative [Annex E](#) – Permeation resistance against different gases – has been added.

A list of all parts in the ISO 16486 series can be found on the ISO website.

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 the general requirements for a piping system and its components made from unplasticized polyamide (PA-U), which are intended to be used for the supply of gaseous fuels.

Requirements and test methods for components of the piping system are specified in ISO 16486-2, ISO 16486-3, and ISO 16486-4.

Characteristics for fitness for purpose of the system and generic fusion parameters are covered in ISO 16486-5.

Recommended practice for installation is given in ISO 16486-6, which will not be implemented as a European Standard under the Vienna Agreement.

Assessment of conformity of the system is to form the subject of the future ISO/TS 16486-7¹⁾.

NOTE 1 Recommended practice for installation is also given in CEN/TS 12007-6, which has been prepared by Technical Committee CEN/TC 234, *Gas infrastructure*.

NOTE 2 A list of ASTM standards related to polyamide pipes and fittings for the supply of gas is given in the Bibliography^{[1][2][3][4]}.

Parts 1 (this document), 2, 3, 5 and 6 (and future Part 7) have been prepared by ISO/TC 138/SC 4. Part 4 has been prepared by ISO/TC 138/SC 7.

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