



SLOVENSKI STANDARD
oSIST prEN ISO 10286:2024
01-junij-2024

Plinske jeklenke - Terminologija (ISO/DIS 10286:2024)

Gas cylinders - Vocabulary (ISO/DIS 10286:2024)

Gasflaschen - Vokabular (ISO/DIS 10286:2024)

Bouteilles à gaz - Vocabulaire (ISO/DIS 10286:2024)

Ta slovenski standard je istoveten z: prEN ISO 10286

ICS:

01.040.23	Tekočinski sistemi in sestavni deli za splošno rabo (Slovarji)	Fluid systems and components for general use (Vocabularies)
23.020.35	Plinske jeklenke	Gas cylinders

oSIST prEN ISO 10286:2024

en,fr,de



DRAFT International Standard

ISO/DIS 10286

Gas cylinders — Vocabulary

Bouteilles à gaz — Vocabulaire

Gasflaschen — Vokabular

ICS: 23.020.35; 01.040.23

ISO/TC 58

Secretariat: **BSI**

Voting begins on:
2024-04-11

Voting terminates on:
2024-07-04

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This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 10286:2024(en)

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Published in Switzerland

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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).

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).

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 58, *Gas cylinders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This sixth edition cancels and replaces the fifth edition (ISO 10286:2021). The changes are as follows:

- introduction of several new terms and definitions throughout [clause 3](#);
- correction of definitions throughout [clause 3](#);
- removal of some terms and definitions in [clause 3](#);
- addition to [Annex B](#) of both the terms introduced in [clause 3](#) and of additional terms where no definition needs to be given but the correct translation into French and German needs to be given.

In addition to text written in the official ISO languages (English, French), this document gives text in German. This text is published under the responsibility of the Member Body for Germany (DIN) and is given for information only. Only the text given in the official languages can be considered as ISO text.

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.

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Introduction

The terms and definitions in this document are given in the following layout:

preferred term(s)	in bold typeface
admitted term(s)	or synonyms, in normal typeface
DEPRECATED: deprecated term	deprecated term(s), in normal typeface, with the designation “DEPRECATED”:
definition	the definition, where available, in normal typeface
Note 1 to entry:	notes to entry, cross-references and examples.
Figures/non-verbal representations	

The terms in this document are sorted in systematic order as far as possible. Further guidance on terminological presentation can be found in ISO 10241-1.

The definitions support the understanding of the terms used in this document. They have been prepared with due regard to possible uses in different fields related to gas cylinders. However, it is possible that they will require adaption for particular uses.

Within this document, the term “ADR” is for simplification used as to also include similar regulations such as RID and ADN, where appropriate.

[Table 1](#) shows a hierarchical overview of pressure receptacles according to the UN Model Regulations.

[Annex A](#) shows the different pressures for pressure receptacles in relation to each other.

[Annex B](#) shows a table giving both the terms of [clause 3](#) as well as terms for additional terminology including the translation to the other two languages of this three-language document.

[Annex C](#) shows figures related to the additional terminology given in [Annex B](#).

Terms given in square brackets are not within the scope of this document. They are shown for information only.

Unless noted by exception, the use of the word “cylinder” in this document refers to cylinders as well as tubes and pressure drums.

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Table 1 — Overview of terms for pressure receptacles and related containers which are not defined as pressure receptacles

	pressure receptacle							[tank ^a]	
	battery-vehicled	small receptacle containing gas (gas cartridge) and aerosol dispenser	MEGC (multiple-element gas container)	cylinder	tube	pressure drum	bundle of cylinders		salvage pressure receptacle
a	In scope of CEN/TC 296 and CEN/TC 286.								
b	In scope of ISO/TC 220.								
c	In scope of ISO/TC 197.								
d	This designation is used in the ADR.								
NOTE Within this document, for simplification, the use of the term “ADR” also includes similar regulations such as RID and ADN, where appropriate.									

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Gas cylinders — Vocabulary

1 Scope

This document defines terms for gas cylinders and other pressure receptacles, their fittings and requirements relating to their manufacture and use.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Terms related to pressure receptacles

3.1.1 All pressure receptacles

3.1.1.1

pressure receptacle

DEPRECATED: receptacle

transportable receptacle intended for holding substances under pressure including its closure(s) and other service equipment

Note 1 to entry: It is a collective term that includes cylinders, tubes, pressure drums, closed cryogenic receptacles, metal-hydride storage system, bundle of cylinders and salvage pressure receptacles.

EXAMPLE Seamless gas cylinder:



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3.1.1.2

cylinder gas cylinder

transportable pressure receptacle of a water capacity not exceeding 150 l

Note 1 to entry: In ISO/TC 58 standards, the term “gas cylinder” is frequently used for clarification.

3.1.1.3

tube

pressure receptacle of seamless or composite construction having a water capacity exceeding 150 l but not more than 3 000 l

Note 1 to entry: In ISO/TC 58, standards for composite tubes with a greater water capacity are under development as of 2023.

3.1.1.4

pressure drum

welded pressure receptacle of a water capacity exceeding 150 l and of not more than 1 000 l

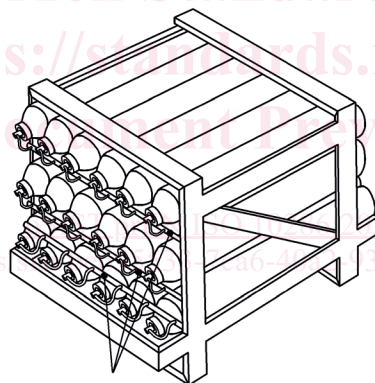
3.1.1.5

bundle of cylinders

DEPRECATED: cylinder bundle, cylinder pack

pressure receptacle comprising an assembly of cylinders or cylinder shells that are fastened together and which are interconnected by a manifold and transported as a unit, having a total water capacity not exceeding 3 000 l except that bundles intended for the transport of toxic gases shall be limited to 1 000 l total water capacity

EXAMPLE



Note 1 to entry: In ISO/TC 58 standards, the term “bundle” is frequently used for simplification.

3.1.1.6

salvage pressure receptacle

pressure receptacle with a water capacity not exceeding 3 000 l into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) for the purpose of transport, e.g. for recovery or disposal

3.1.1.7

small receptacle containing gas

gas cartridge

non-refillable receptacle having a water capacity not exceeding 1 000 ml for receptacles made of metal and not exceeding 500 ml for receptacles made of synthetic material or glass, containing under pressure a gas or mixture of gases

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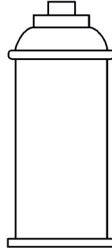
3.1.1.8

aerosol

aerosol dispenser

non-refillable receptacle made of metal, glass or plastics and containing a gas, compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder and fitted with a release device allowing the contents to be ejected

EXAMPLE



Note 1 to entry: This note applies to the German language only.

3.1.1.9

metal hydride storage system

single complete hydrogen storage system, including a pressure receptacle shell, metal hydride, pressure relief device, shut-off valve, service equipment and internal components used for the transport of hydrogen only

Note 1 to entry: Metal hydride storage systems are covered by ISO/TC 197. This definition is adopted from the UN Model Regulations. See also [Table 1](#).

3.1.1.10

closed cryogenic receptacle

transportable thermally insulated receptacle for refrigerated liquefied gases, of a water capacity of not more than 1 000 l

Note 1 to entry: Closed cryogenic receptacles are covered by ISO/TC 220. This definition is adopted from the UN Model Regulations. See also [Table 1](#).

3.1.1.11

MEGC

multiple-element gas container

multimodal assembly of cylinders, tubes or bundles of cylinders which are interconnected by a manifold and assembled within a framework, including service equipment and structural equipment necessary for the transport of gases

Note 1 to entry: This definition is taken from the UN Model Regulations. ADR uses a different definition.

3.1.1.12

battery-vehicle

vehicle containing elements which are linked to each other by a manifold and permanently fixed to a transport unit

Note 1 to entry: The following elements are considered to be elements of a battery-vehicle: cylinders, tubes, bundles of cylinders and pressure drums, as well as certain tanks destined for the carriage of gases with a capacity of more than 450 l.

Note 2 to entry: This term is used in the ADR only. There is no definition in the UN Model Regulations.

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3.1.1.13

tank

portable tank, including a tank container, a road tank-vehicle, a rail tank-wagon or a receptacle to contain solids, liquids or gases, having a capacity of not less than 450 l when used for the transport of gases

Note 1 to entry: This definition is taken from the UN Model Regulations. ADR uses a different definition.

3.1.1.14

portable

capable of being carried by hand

Note 1 to entry: When used in connection with tanks, this means “transportable”.

3.1.1.15

user

entity (or individual) that operates and/or uses equipment

3.1.1.16

minimum design wall thickness

thickness of the metallic cylinder wall calculated from the design standard, taking into account the material properties and dimensions at time of manufacture

3.1.1.17

external coating

layer of material applied to the cylinder as a protective coating not intended to be removed or for cosmetic purposes

EXAMPLE Gel coat and paint.

Note 1 to entry: Not all composite cylinders will have an external coating.

3.1.1.18

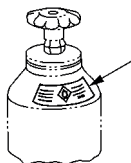
precautionary label

label giving information on the recommended measures to minimize or prevent adverse effects resulting from exposure to content, which includes identification of content (UN Number, Proper Shipping Name), hazards of the content and precautions to be observed in the storage and use of the pressure receptacle and its contents

EXAMPLE

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Note 1 to entry: See ISO 7225 for additional examples

3.1.2 All gas cylinders

3.1.2.1

type 1

category of pressure receptacles that includes all metal pressure receptacles

3.1.2.2

composite cylinder

cylinder reinforced by continuous filaments held in a matrix

Note 1 to entry: Cylinders of type 2, type 3, type 4 and type 5 are composite cylinders.

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3.1.2.3

type 2

category of pressure receptacles that refers to hoop wrapped pressure receptacle with a load-sharing metal liner and composite reinforcement on the cylindrical portion only

3.1.2.4

type 3

category of pressure receptacles that refers to fully wrapped pressure receptacle with a load sharing metal liner and composite reinforcement on both the cylindrical portion and the dome ends

3.1.2.5

type 4

category of pressure receptacles that refers to fully wrapped pressure receptacle with a non-load sharing liner and composite reinforcement on both the cylindrical portion and the dome ends

3.1.2.6

type 5

category of pressure receptacles that refers to composite pressure receptacle without a liner

3.1.2.7

acetylene cylinder

cylinder manufactured and suitable for the transport of acetylene, containing a porous material and solvent (where applicable) for acetylene with a valve and other accessories affixed to the cylinder

3.1.2.8

cylinder end

cylinder base or cylinder shoulder

3.1.2.9

cylinder neck thread

axial hole with a tapered or parallel thread formed on the internal surface of a cylinder neck

Note 1 to entry: For parallel threads, this includes a thread formed on the internal surface including a sealing recess for the "O" ring and thread relief.

3.1.2.10

non-refillable cylinder

cylinder including a non-refillable sealing device that permits the cylinder to be filled only once

3.1.2.11

sleeve

transparent or non-transparent cover fitted to the outside surface of the cylinder

3.1.2.12

non-refillable sealing device

device permanently attached to the cylinder which, once activated, prevents the cylinder from being refilled

3.1.3 Composite gas cylinders

3.1.3.1

overwrap

reinforcement system of filament and matrix applied over the liner

3.1.3.2

matrix

material that is used to bind and hold the fibres in place

3.1.3.3

resin

polymer which is used for composite cylinders as a matrix or coating

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3.1.3.4

liner

inner portion of a composite cylinder, comprising a metallic or non-metallic vessel, whose purpose is both to contain the gas and transmit the gas pressure to the overwrap

3.1.3.5

load-sharing liner

load-bearing liner

liner which has a burst pressure greater than or equal to 5 % of the nominal burst pressure of the finished composite cylinder

3.1.3.6

non load-sharing liner

non load-bearing liner

liner that has a burst pressure less than 5 % of the nominal burst pressure of the finished composite cylinder

3.1.3.7

fibre

DEPRECATED: strand

continuous filaments laid up in a bundled (tow) form

3.1.3.8

carbon fibre

continuous filaments of carbon laid up in a bundled (tow) form

3.1.3.9

glass fibre

continuous filaments of glass laid up in a bundled (tow) form

3.1.3.10

aramid fibre

continuous filaments of aramid laid up in a bundled (tow) form

3.1.3.11

translucent cylinder

cylinder that permits the passage of light

3.1.3.12

permanent protective attachment

integral part of the cylinder design permanently affixed to composite cylinders (type 2 to 5) covering part of or the entire surface of the cylinder, providing additional functions during handling, transport and use

3.1.4 Acetylene cylinders

3.1.4.1

porous material

single- or multiple-component material introduced to, or formed in, the cylinder shell, that, due to its porosity, allows the absorption of a solvent/acetylene solution

Note 1 to entry: The porous material can be either:

- monolithic, consisting of a solid product obtained by reacting materials or by materials connected together with a binder; or
- non-monolithic, consisting of granular, fibrous or similar materials without the addition of a binder.

3.1.4.2

top clearance

<acetylene cylinder> gap between the inside of the cylinder shoulder and the monolithic porous material