



SLOVENSKI STANDARD
SIST EN 14564:2019

01-december-2019

Nadomešča:
SIST EN 14564:2013

Cisterne za prevoz nevarnega blaga - Terminologija

Tanks for the transport of dangerous goods - Terminology

Tanks für die Beförderung gefährlicher Güter - Begriffe

Citernes pour le transport des matières dangereuses - Terminologie
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ICS:

01.040.23	Tekočinski sistemi in sestavni deli za splošno rabo (Slovarji)	Fluid systems and components for general use (Vocabularies)
13.300	Varstvo pred nevarnimi izdelki	Protection against dangerous goods
23.020.20	Posode in vsebniki, montirani na vozila	Vessels and containers mounted on vehicles

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en,fr,de

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EUROPEAN STANDARD

EN 14564

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 14564:2013

English Version

Tanks for transport of dangerous goods - Terminology

Citernes pour le transport des matières dangereuses -
Terminologie

Tanks für die Beförderung gefährlicher Güter - Begriffe

This European Standard was approved by CEN on 12 May 2019.

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.

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

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European foreword

This document (EN 14564:2019) has been prepared by Technical Committee CEN/TC 296 “Tanks for the transport of dangerous goods”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by February 2020, and conflicting national standards shall be withdrawn at the latest by February 2020.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 14564:2013.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document provides uniform terminology for technical terms, which require definition in addition to regulatory definitions based in RID/ADR, and specific terms defined in other standards on tanks for transport of dangerous goods, prepared by CEN/TC 296.

Clause 3 defines general terms and Clause 4 defines specific terms.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

EN 14564:2019 (E)**1 Scope**

This document provides additional terms and definitions to those written in the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) or the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID), appearing as Appendix C to the Convention concerning International Carriage by Rail (COTIF).

This document forms part of series of documents prepared by CEN/TC 296 regarding the transport of dangerous goods. The series supports the proper application of the ADR and RID.

This document is applicable to tanks used for the transport of dangerous goods.

This document does not apply to carriage in bulk of dangerous goods.

For convenience, Annex A (informative) repeats some horizontal definitions taken from ADR 2017 chapter 1.2, and Annex B (informative) repeats some definitions from ADR 2017 chapter 6.7, specific to portable tanks.

NOTE The ADR is updated on a regular basis, therefore Annexes A and B might become out of date.

Annexes C, D and E (informative) provide alphabetical trilingual indexes of terms in English, French and German where the key is English, French and German respectively.

Annex F (normative) is a schematic diagram of tank openings and closures according to the tank code.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

**3.1
accessory**
equipment mounted to the tank which is not part of the shell or service equipment or structural equipment

**3.2
adaptor**
closure with a particular connection profile

**3.3
baffle**
non-hermetically sealed structure other than a surge plate, intended to inhibit the movement of the shell contents

3.4**breathing**

automatic and normal function to control pressure and vacuum between the inside and the outside of the shell

3.5**closure**

device that closes an opening of a tank

Note 1 to entry: For position of closures see Figures F.1 to F.7 of Annex F.

3.6**cold forming**

forming at temperatures not less than 25 °C below the maximum permissible temperature for stress relieving, in accordance with the applicable material specifications

3.7**cover plate**

closure of an opening of the shell that is not service equipment

3.8**design stress**

stress value used for calculation

3.9**design temperature**

temperature chosen for the design of each part of the tank

3.10**elliptical cross section**

cross section that respects the following criteria:

- the cross section of the shape is contained into a circle;
- the elliptical cross section has the same width as the circle;
- the minimum radius of curvature is not less than 250 mm;
- the maximum width of the circle is 2 550 mm;
- the maximum width of the elliptical cross section is no more than the maximum allowed width of the vehicle;
- the maximum radius of curvature is no more than 2 000 mm;
- the cross section is convex

3.11**end**

head

part of the shell shutting off the longitudinal section

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EN 14564:2019 (E)**3.12****fastenings**

structural equipment used for fixing the tank on the chassis, frame or auxiliary frame

3.13**flame arrester**

flame trap

device fitted to the opening of an enclosure or to the connecting pipework of a system of enclosures and whose intended function is to allow the flow of gaseous substances but prevent the transmission of flame or spark

3.14**hydraulic pressure test**

strength test carried out with liquid (generally water)

3.15**inspector**

individual of an inspection body approved by the competent authority

3.16**leak proof**

able to contain the fluid

Note 1 to entry: As specified in EN 12266-1:2012, Table A.5, Rate A.

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3.17**nominal capacity**

maximum volume intended to be carried [SIST EN 14564:2019](#)

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3.18**partition**

hermetically sealed dividing wall between adjacent compartments in compartmented tanks

3.19**pressure balanced**

equilibrium of substance pressure on both sides of the internal stop valve

3.20**product sensor**

device, which detects the presence of product in liquid phase, and whose output signal can be used to display whether liquid is present

3.21**protective lining or coating**

lining or coating protecting the metallic tank material against corrosion or reaction with the substances to be transported

Note 1 to entry: This definition does not apply to a lining or coating used only to protect the substance to be carried.

3.22**repair**

correction of a defect that could have impaired the safety of the tank or where equipment that commences directly with the content of the shell or safety device is replaced

Note 1 to entry: It does not include normal service and maintenance operations of the shell or service equipment or replacement of gaskets or service equipment to the same specification.

3.23**run off pipe**

pipe connecting a footvalve to the associated external closure

3.24**self-actuating adaptor**

adaptor capable of being opened by built-in and external means

3.25**self-closing (valve)**

valve held in the closed position by means of stored energy (such as a spring), which opens only by application of external force, and which closes when the external force is removed

3.26**surge plate**

non-hermetically sealed wall in tanks or compartments of shells intended to reduce the effect of surge, mounted at right angles to the direction of travel, having an area of at least 70 % of the cross-sectional area of the shells where the surge plate is located

3.27**test**

technical operation that consists of the determination of one or more characteristics of a given tank and/or service equipment, process or service according to a specified procedure

3.28**venting**

function allowing passage of gas during filling and emptying

3.29**weld joint factor**

stress reduction factor applied because of the welding manufacturing process

4 Specific terms**4.1****bottom loading**

filling of a tank through the tank's piping system that enables substances to enter the tank compartments from the bottom

4.2**demountable**

part of service equipment that is not permanently attached (welded) or demountable with a special tool

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- 4.3**
fill hole
opening in a tank or in a manhole cover assembly to allow top filling of a tank compartment
- 4.4**
fill hole cover
operating device on top of a tank or part of manhole cover to enable top loading and closing the fill hole
- 4.5**
interlock
device which can be used to permit or prevent an action
- 4.6**
load plan
plan that identifies the different substances and volumes to be loaded into each tank compartment
- 4.7**
manhole
opening in a tank to allow internal inspection by a person passing through
- 4.8**
manhole cover plate
plate covering the manhole which may include auxiliary equipment such as fill hole cover assembly, vapour transfer valve, sensors, etc.
- 4.9**
neck ring
ring joined to the shell that provides the attachment for a cover plate
- 4.10**
overflow prevention system
sensor or sensor circuits, interface plug/socket, overflow prevention controller and all connecting wiring and cables
- 4.11**
plug and ball valve
valve in which the obturator rotates about an axis at right angle to the direction of flow and, in the open position, the flow passes through the obturator
- 4.12**
relief pressure
pressure at which the safety valve starts to open
- 4.13**
vapour collection manifold
piping system into which each vapour transfer valve from each compartment is connected and which connects to the vapour recovery adaptor

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Document for a cover plate
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Annex A (informative)

RID/ADR 2017 definitions

A.1 Battery-vehicle/battery-wagon:

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

The following elements are considered to be elements of a battery-vehicle/wagon: cylinders, tubes, bundles of cylinders (also known as frames), pressure drums as well as tanks destined for the carriage of gases of Class 2 with a capacity of more than 450 l.

A.2 Calculation pressure:

Theoretical pressure at least equal to the test pressure which, according to the degree of danger exhibited by the substance being carried, may to a greater or lesser degree exceed the working pressure.

It is used solely to determine the thickness of the walls of the shell, independently of any external or internal reinforcing device (See also "Discharge pressure", "Filling pressure", "Maximum working pressure (gauge pressure)" and "Test pressure").

A.3 Capacity of shell or shell compartment:

For tanks, means the total inner volume of the shell or shell compartments expressed in litres or cubic metres. When it is impossible to completely fill the shell or the shell compartment because of its shape or construction, this reduced capacity shall be used for the determination of the degree of filling and for the marking of the tank.

NOTE This capacity does not include the loading pipework from the first to the 2nd closure.

A.4 Carriage in bulk:

Carriage of unpackaged solids or articles in vehicles/wagons or bulk containers. The term does not apply to packaged goods nor to substances carried in tanks.

A.5 Competent authority:

Authority or authorities or any other body or bodies designated as such in each State and in each specific case in accordance with domestic law.

A.6 Conformity assessment:

The process of verifying the conformity of a product according to the provisions of sections 1.8.6 and 1.8.7 (of RID/ADR) related to type approval, supervision of manufacture and initial inspection and testing.

A.7 Control temperature:

The maximum temperature at which the organic peroxide or the self-reactive substance can be safely carried.

EN 14564:2019 (E)**A.8 Critical temperature:**

The temperature above which the substance cannot exist in the liquid state.

A.9 Dangerous goods:

Those substances and articles, the carriage of which is prohibited by RID/ADR, or authorized only under the conditions prescribed therein.

A.10 Tank types:**A.10.1 Demountable tank (ADR):**

A tank, other than a fixed tank, a portable tank, a tank-container or an element of a battery-vehicle or a MEGC which has a capacity of more than 450 l, is not designed for the carriage of goods without breakage of load, and normally can only be handled when it is empty.

A.10.2 Demountable tank (RID):

A tank designed to fit the special apparatus of the wagon but which can only be removed from it after dismantling their means of attachment.

A.11 Discharge pressure:

Maximum pressure actually built up in the tank when it is being discharged under pressure (see also "Calculation pressure", "Filling pressure", "Maximum working pressure (gauge pressure)" and "Test pressure").

A.12 Emergency temperature:

Means the temperature at which emergency procedures shall be implemented in the event of loss of temperature control.

A.13 Filling pressure:

Maximum pressure actually built up in the tank when it is being filled under pressure (see also "Calculation pressure", "Discharge pressure", "Maximum working pressure (gauge pressure)" and "Test pressure").

A.14 Fixed tank:

Tank having a capacity of more than 1 000 l which is permanently attached to a vehicle or a wagon (which then becomes a tank-vehicle/tank wagon) or is an integral part of the frame of such vehicle or wagon.

A.15 Flash-point:

The lowest temperature of a liquid at which its vapours form a flammable mixture with air.

A.16 Gas:

Substance which:

- a) at 50 °C has a vapour pressure greater than 300 kPa (3 bar); or
- b) is completely gaseous at 20 °C under standard pressure of 101,3 kPa.

A.17 Hermetically closed tank:

A tank intended for the carriage of liquid substances with a calculation pressure of at least 4 bar or intended for the carriage of solid substances (powdery or granular) regardless of its calculation pressure, the openings of which are hermetically closed and which:

- is not equipped with safety valves, bursting discs, other similar safety devices or vacuum valves; or
- is not equipped with safety valves, bursting discs or other similar safety devices, but is equipped with vacuum valves, in accordance with the requirements of 6.8.2.2.3 of RID/ADR;
- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10 of RID/ADR but is not equipped with vacuum valves; or
- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10 of RID/ADR and vacuum valves, in accordance with the requirements of 6.8.2.2.3 of RID/ADR.

A.18 Inspection body:

An independent inspection and testing body approved by the competent authority.

A.19 Leakproofness test:

A test to determine the leakproofness of a tank and of the equipment and closure devices.

A.20 Liquid:

Substance which at 50 °C has a vapour pressure of not more than 300 kPa (3 bar), which is not completely gaseous at 20 °C and 101,3 kPa, and which:

- a) has a melting point or initial melting point of 20 °C or less at a pressure of 101,3 kPa; or
- b) is liquid according to the ASTM D 4359-90 test method; or
- c) is not pasty according to the criteria applicable to the test for determining fluidity (penetrometer test) described in 2.3.4 of RID/ADR.

NOTE "Carriage in the liquid state", for the purpose of tank requirements, means:

- carriage of liquids according to the above definition; or
- solids handed over for carriage in the molten state.

A.21 Maximum permissible gross mass:

Tare of the tank and the heaviest load authorized for carriage

A.22 Maximum working pressure (gauge pressure):

Highest of the following three pressures that may occur at the top of the tank in the operating position:

- a) highest effective pressure allowed in the tank during filling (maximum filling pressure allowed);
- b) highest effective pressure allowed in the tank during discharge (maximum discharge pressure allowed); and
- c) effective gauge pressure to which the tank is subjected by its contents (including such extraneous gases as it may contain) at the maximum working temperature.