



SLOVENSKI STANDARD SIST EN 12641-2:2020

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Nadomešča:
SIST EN 12641-2:2007

Intermodalne nakladalne enote in gospodarska vozila - Ponjave - 2. del: Minimalne zahteve za stranske zavese

Intermodal loading units and commercial vehicles - Tarpaulins - Part 2: Minimum requirements for curtainsiders

Intermodale Ladeeinheiten und Nutzfahrzeuge - Planen - Teil 2: Mindestanforderungen an Schiebeplanen

Unités de transport intermodal et véhicules utilitaires - Bâches - Partie 2 : Exigences minimales pour rideaux coulissants latéraux

<https://standards.iteh.ai/catalog/standards/sist/c4ba4d0b-61bd-41f1-9925-a34e735b8fac/sist-en-12641-2-2020>

Ta slovenski standard je istoveten z: EN 12641-2:2019

ICS:

55.180.10 Večnamenski kontejnerji General purpose containers

SIST EN 12641-2:2020

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EUROPEAN STANDARD

EN 12641-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2019

ICS 55.180.10

Supersedes EN 12641-2:2006

English Version

Intermodal loading units and commercial vehicles - Tarpaulins - Part 2: Minimum requirements for curtainiders

Caisses mobiles - Bâches - Partie 2 : Prescriptions
minimales pour rideaux coulissants

Intermodale Ladeeinheiten und Nutzfahrzeuge -
Planen - Teil 2: Mindestanforderungen an
Schiebeplanen

This European Standard was approved by CEN on 9 September 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.

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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.

CEN members are the national standards bodies of 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 United Kingdom.



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

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Contents		Page
European foreword		3
1	Scope	4
2	Normative references	4
3	Terms and definitions	4
4	Requirements	5
5	Marking	10
Bibliography		12

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European foreword

This document (EN 12641-2:2019) has been prepared by Technical Committee CEN/TC 119 "Intermodal Loading Units and Cargo Securing (ILUCS)", 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 June 2020, and conflicting national standards shall be withdrawn at the latest by June 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 12641-2:2006.

The main technical changes in comparison to the previous edition are:

- the addition of clause 3 'Terms and definitions';
- the elimination of the discord between text and formula in the old clause 3.3, now clause 4.3;
- the wire hook has been added;
- the description of the testing methods has been adjusted to the reality and the mass per unit area of the tarpaulin material (g/m^2) was added on the marking.

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 12641-2:2019 (E)**1 Scope**

This document specifies minimum requirements for the strength and attachment of tarpaulins used as curtainsiders on intermodal loading units and commercial vehicles.

NOTE The described tarpaulins according to this document only work for load securing with a body according to EN12642, Code XL or EN 283.

2 Normative references

The following documents are referred to 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.

EN 1875-3, *Rubber- or plastics- coated fabrics - Determination of tear strength - Part 3: Trapezoidal method*

EN ISO 1421, *Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break (ISO 1421)*

EN ISO 2286-2, *Rubber- or plastics-coated fabrics - Determination of roll characteristics - Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate (ISO 2286-2)*

EN ISO 2411, *Rubber- or plastics-coated fabrics - Determination of coating adhesion (ISO 2411)*

EN ISO 7854, *Rubber- or plastics-coated fabrics - Determination of resistance to damage by flexing (ISO 7854)*

ISO 3795, *Road vehicles, and tractors and machinery for agriculture and forestry - Determination of burning behaviour of interior materials*

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 <https://www.iso.org/obp>

3.1
intermodal loading unit
ILU

transport unit which may be a container, swap body, semi-trailer or road-trailer and commercial vehicles suitable for inter-modal transport

Note 1 to entry: see ISO/IWA 16.

3.2
side curtain
tarpaulin fixed on one or both sides of swap body or commercial vehicle

4 Requirements

4.1 General

The following minimum requirements regarding tarpaulin design and attachment to the swap body or commercial vehicle shall be met.

4.2 Materials

The quality of the materials used shall be such that the resulting product will conform to the requirements of Table 1 and ensure uniformity of the performance.

Table 1 — Material requirements

Characteristic	Requirements	Test method according to
Breaking strength in warp and weft - at $(23 \pm 5)^\circ\text{C}$ ^a - at -25°C ^b	$\geq 4\,000\text{ N}/5\text{ cm} \geq 2\,700\text{ N}/5\text{ cm}$	EN ISO 1421
Resistance to tear propagation in warp and weft - at $(23 \pm 5)^\circ\text{C}$ ^a - at -25°C ^b	$\geq 300\text{ N} \geq 130\text{ N}$	EN 1875-3
Adhesion ^c	$\geq 100\text{ N}/5\text{ cm}$	EN ISO 2411
Dimensional stability	$\leq 1\%$	24 h at 70°C
Buckling strength	No cracks after 100 000 bending operations	EN ISO 7854
Fire resistance	Burning Rate $< 100\text{ mm}/\text{min}$	ISO 3795
mass per area ^d	$> 850\text{ g}/\text{m}^2$	EN ISO 2286-2
^a i.e. room temperature. ^b For special applications, a test temperature of -40°C may be applied, if agreed between user and supplier. ^c EN ISO 2411 specifies the requirement for attaching a separate piece of fabric, using glue, to facilitate the test. For purposes of EN 12641-2, this attachment should be effected by the use of a welding process. ^d From the site specific mass can be varied, if the remaining technical requirements of Table 1 will be fulfilled.		

The mass per m^2 of tarpaulin material (according to EN ISO 2286-2) shall be documented on the marking (see Clause 5).

The belt hooks shall remain in the correct working position when the belt is slack in order to hold the hooks. The test shall not impair the functional capability.

4.5 Tarpaulin sides

4.5.1 General

During transport operations, the tarpaulin sides shall be tensioned both in horizontal and in vertical direction.

4.5.2 Vertical tensioning devices

The locking procedure for tensioning devices shall be clear and obvious.

The hand levers for belt tensioning shall be in positive engagement in the closed position. To release the hand lever, it shall be necessary to unlock it first by actuating a separate unlocking device.

Belt tensioners, which are at least equivalent in function and safety, are also admissible.

The belt length between the belt hook and the upper deflection point of the belt tensioning lever should be at most 350 mm.

If the intermodal loading unit or commercial vehicle is equipped with grappler plates, the value of 350 mm may be exceeded within this specific area.

Tensioners which work without belts and which are at least equivalent in function and safety are also admissible.

4.5.3 Horizontal tensioning devices

The closure of the side curtain in horizontal direction has to be carried out at both front sides of the tarpaulin.

The edges of the tarpaulin at the front sides shall be framed by a rod of metal or equivalent material.

This rod is hooked on one front wall side of the tarpaulin and on the other front wall side of the tarpaulin tensioned by a mechanism.

In general, the horizontal tensioning of the tarpaulin is achieved by turning of the rod and thereby coiling the tarpaulin at the tightening end.

The tensioning mechanism shall be self-locking. Alternatively, if self-locking is not provided, there shall be a different locking system for the hand lever which is secured against unintentional release and the actuation of which shall be clear and obvious.

4.5.4 Testing

4.5.4.1 General

Testing in accordance with 4.5.4.2 and 4.5.4.3 is intended to demonstrate a minimum strength of the vertical belt system. For static test purposes, a tarpaulin segment (with rollers, buckles and hooks) of 2 vertical belts with a distance of 600 mm \pm 100 mm in width of the tarpaulin of at least 1 200 mm and 2 900 mm to 3 000 mm in length (measured from the roller to the hooking-on point of the tarpaulin) with a tensioning test device fitted at the centre shall be used.

If, in general, the lateral height of the tarpaulin is \leq 2 500 mm the test can be carried out with a tarpaulin that is appropriately shorter.

The top roll guide and the hooking on the lower end of the tarpaulin shall be constructed as in the original test specimen to be used later.