

Swap bodies and commercial vehicles — Tarpaulins —

Part 1: Minimum requirements

The European Standard EN 12641-1:2005 has the status of a
British Standard

ICS 55.180.10

National foreword

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Summary of pages

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Foreword

This European Standard (EN 12641-1:2005) has been prepared by Technical Committee CEN/TC 119 “Swap bodies for combined goods transport”, 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of an identical text or by endorsement, at the latest by February 2006, and conflicting national standards shall be withdrawn at the latest by February 2006.

This European Standard supersedes EN 12641-1:2000.

This European Standard consists of two parts. The other part is:

prEN 12641-2, *Swap bodies and commercial vehicles - Tarpaulins - Part 2: Minimum requirements for curtainsiders*

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Introduction

The purpose of this European Standard is to combine the national standards into one single European Standard to ensure for the future a free, unimpeded circulation of swap bodies in Europe within road/ rail combined transport.

1 Scope

This European Standard specifies minimum requirements for the strength and attachment of tarpaulins used on swap bodies for combined transport and may be used for other applications, e.g. commercial vehicles.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. 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 1421:1998)*

EN ISO 2286-2, *Rubber- or plastic-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 2286-2:1998)*

EN ISO 2411, *Rubber- or plastic-coated fabrics – Determination of coating adhesion (ISO 2411:2000)*

EN ISO 7854, *Rubber- or plastic-coated fabrics – Determination of resistance to damage by flexing (ISO 7854:1995)*

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

3 Requirements

3.1 General

The following minimum requirements regarding the rigidity of tarpaulins and their attachments shall be met.

3.2 Materials

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

Table 1 — Test requirements and methods

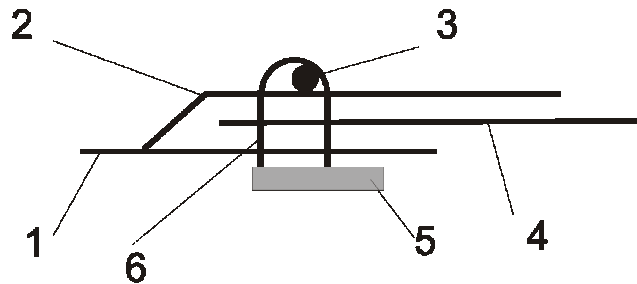
Characteristic	Requirements	Test method according to
Breaking strength in warp and weft - at $(23 \pm 5)^{\circ}\text{C}$ ^a - at -25°C ^b	$\geq 2\,850\text{ N/5 cm}$ $\geq 2\,200\text{ N/5 cm}$	EN ISO 1421
Resistance to tear propagation in warp and weft - at $(23 \pm 5)^{\circ}\text{C}$ ^a - at -25°C ^b	$\geq 185\text{ N}$ $\geq 120\text{ N}$	EN 1875-3
Adhesion ^c	$\geq 100\text{ N/5 cm}$	EN ISO 2411
Dimensional stability	$\leq 1\%$	24 h at 70°C
Buckling strength	No cracks after 100 000 bending operations	EN ISO 7854/B
Fire resistance	Burning Rate < 100 mm/min	ISO 3795
Total mass per area	> 650 g/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. Requirements however have not yet been stipulated. ^c EN ISO 2411 specifies the test for the determination of the adhesiveness using glue. For the purposes of this European Standard the connection shall be effected by the use of a welding process. This is also valid for the test.		

3.3 Construction of protective cover

If the cover is composed of several pieces, the connections of the pieces shall be such that the same requirements (see Table 1) are met as for the material.

3.4 Divided tarpaulins

Vertically divided tarpaulins shall only be used when joined as shown in Figure 1:



Key

- 1 left hand cover piece
- 2 overlap
- 3 vertical rope
- 4 right hand cover piece
- 5 stanchion (vertical)
- 6 bracket

Figure 1 — Fixation of vertical divided tarpaulins

3.5 Attachment of tarpaulins

With the exception of the area around the stanchions the distance between eyelets shall be no greater than 200 mm (horizontally and vertically). In the region of the stanchions the distance may increase but shall be no more than 300 mm. The loops both vertical and horizontal shall always be arranged in line. Zigzag attachments shall not be acceptable.

The tarpaulin shall be secured with a suitable rope between the swap body brackets and the eyelets of the tarpaulin.

The following ropes are permissible:

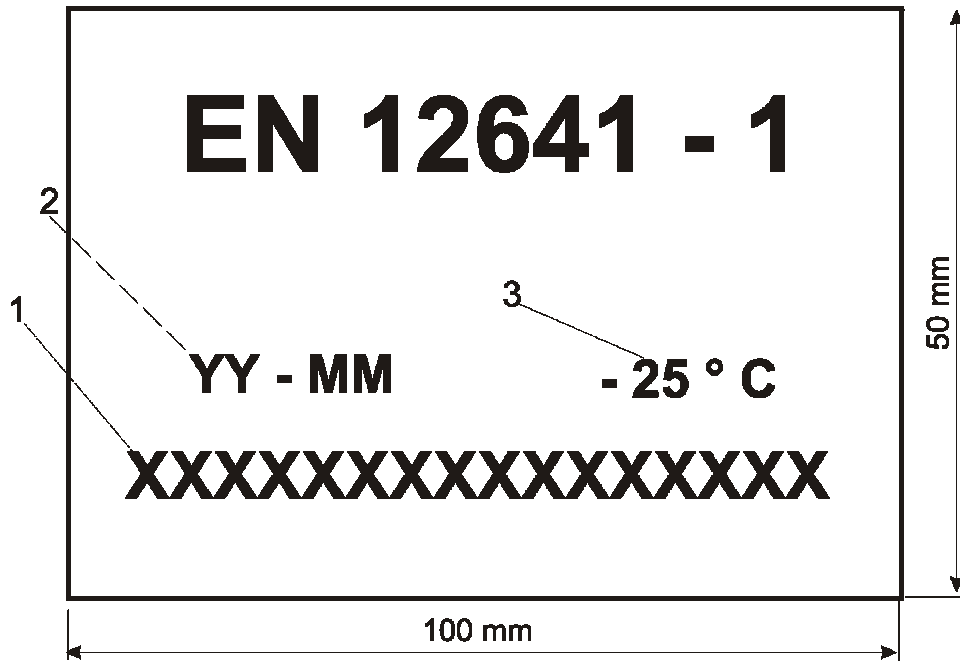
- hemp or sisal ropes not less than 8 mm in diameter which shall be covered with an additional transparent plastic sheath;
- steel wire ropes not less than 3 mm in diameter.

Steel wire ropes with an additional transparent plastic sheath may be used.

4 Marking

Tarpaulins for which compliance with this European Standard is claimed shall only be manufactured from materials durably marked with the following (see example Figure 2):

- number of this European Standard; i.e. EN 12641-1;
- date of manufacture (year and month);
- name of the tarpaulin manufacturer or trade mark;
- lowest permissible minus temperature (i.e. - 25 °C or - 40 °C).



Key

- 1 name of the tarpaulin manufacturer or trade mark
- 2 date of manufacture (year and month)
- 3 lowest possible minus temperature

Figure 2 — Marking of tarpaulins

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