



**NSAI**  
Standards

Irish Standard  
I.S. EN 12642:2016

# Securing of cargo on road vehicles - Body structure of commercial vehicles - Minimum requirements

**I.S. EN 12642:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

*This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):*

*NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.*

*This document is based on:*

EN 12642:2016

*Published:*

2016-11-16

*This document was published  
under the authority of the NSAI  
and comes into effect on:*

2016-12-04

ICS number:

43.080.10

NOTE: If blank see CEN/CENELEC cover page

NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

## National Foreword

I.S. EN 12642:2016 is the adopted Irish version of the European Document EN 12642:2016, Securing of cargo on road vehicles - Body structure of commercial vehicles - Minimum requirements

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with this document does not of itself confer immunity from legal obligations.**

*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

This page is intentionally left blank

**EUROPEAN STANDARD**

**EN 12642**

**NORME EUROPÉENNE**

**EUROPÄISCHE NORM**

November 2016

ICS 43.080.10

Supersedes EN 12642:2006

English Version

## Securing of cargo on road vehicles - Body structure of commercial vehicles - Minimum requirements

Arrimage des charges à bord des véhicules routiers -  
Structure de la carrosserie des véhicules utilitaires -  
Exigences minimales

Ladungssicherung auf Straßenfahrzeugen - Aufbauten  
an Nutzfahrzeugen - Mindestanforderungen

This European Standard was approved by CEN on 20 August 2016.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## EN 12642:2016 (E)

## Contents

Page

European foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Terms and definitions .....	5
4 General requirements .....	5
5 Testing.....	6
5.1 General.....	6
5.2 Static test – Airbag test (Annex A).....	7
5.2.1 Requirements .....	7
5.2.2 General.....	7
5.2.3 Strength of the front wall .....	7
5.2.4 Strength of the rear wall .....	8
5.2.5 Strength of the side wall .....	9
5.2.6 Floor ledge (optional).....	10
5.2.7 Double-decker design (Code XL only) .....	11
5.3 Dynamic driving test (Annex B).....	12
5.3.1 Test acceleration .....	12
5.3.2 General.....	12
6 Documentation.....	13
7 Maintenance.....	14
Annex A (normative) Details of the airbag test .....	15
Annex B (normative) Dynamic driving test .....	16
B.1 General.....	16
B.2 General requirements for the test .....	16
B.3 Conditions of loading.....	16
B.3.1 Test for body structure with defined cargo units.....	16
B.3.2 Test of cargo arrangements with other cargo units .....	16
B.4 Measuring technique and assessment.....	16
B.5 Driving tests .....	17
B.5.1 Use of a supporting axle.....	17
B.5.2 Testing brake deceleration (0,8 g) in longitudinal direction.....	17
B.5.3 Test of transverse acceleration (0,5 g) - U-turn-test .....	18
B.5.4 Change of lane test with accelerations of 0,5 g around both curves each – S-test .....	19
B.5.5 Test of reverse acceleration (0,5 g) .....	20
Annex C (normative) Test certificate of body structure tested according to EN 12642 .....	22
Annex D (informative) Test report of body structure tested according to EN 12642 .....	24
Bibliography.....	26

## **European foreword**

This document (EN 12642:2016) 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 May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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 12642:2006.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **EN 12642:2016 (E)**

### **Introduction**

The aim of this revision is to update the test methods as well as marking and certification of vehicle body structures that are able to take up a part of the forces to secure the cargo. Due to the particular cargo and the body type additional securing of cargo can become necessary and should be determined in each specific case by the shipper, the operator or the driver.



## 1 Scope

This European Standard applies to body structures on commercial vehicles and on trailers.

This European Standard sets out basic minimum requirements for standard vehicle bodies (side walls, front and rear walls) and for reinforced vehicle bodies and specifies appropriate tests.

This European Standard applies to all commercial vehicles which are related by design and body type to the body structures described below.

Forces applied according to the test requirements described below can be invoked for load securing purposes.

The floor of the vehicle is a part of the sub frame. As long as the floor strength is not defined, the manufacturer should give the necessary information. Testing of the axle load on the floor should be carried out analogous to EN 283. The result should be marked in locations according to chapter 6.

This European Standard does not apply to vans according to ISO 27956.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12195-1:2010, *Load restraining on road vehicles - Safety - Part 1: Calculation of securing forces*

IMO/ILO/UNECE, *Code of Practice for Packing of Cargo Transport Units (CTU Code):2014*

## 3 Terms and definitions

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

### 3.1

#### **reinforced vehicle body**

vehicle body, having a reinforced structure, and complying with the minimum requirements for Code XL according to 5.2, Table 1, or 5.3, Table 2

### 3.2

#### **standard vehicle body**

vehicle body complying with the minimum requirements of 5.2 (Code L according to Table 1) which, depending on cargo weight and friction, requires additional securing of cargo using lashing equipment

## 4 General requirements

Verification of conformity to the requirements of this standard shall be provided either by:

- a) dynamic driving tests (see 5.3 and Annex B),
- b) static tests:
  - 1) airbag test (see 5.2 and Annex A),
  - 2) static inclination test according to EN 12195-1:2010 with the type of cargo as described in the dynamic test (see B.3) and the duration time in 5.2.2,

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-