



**NSAI**  
Standards

Irish Standard  
I.S. EN 50125-1:2014

# Railway applications - Environmental conditions for equipment -- Part 1: Rolling stock and on-board equipment

**I.S. EN 50125-1:2014**

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

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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

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English version

**Railway applications -**  
**Environmental conditions for equipment -**  
**Part 1: Rolling stock and on-board equipment**

Applications ferroviaires -  
Conditions d'environnement pour le  
matériel -  
Partie 1: Equipement embarqué du  
matériel roulant

Bahnanwendungen – Umweltbedingungen  
für Betriebsmittel – Teil 1: Betriebsmittel  
auf Bahnfahrzeugen

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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 CENELEC 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 Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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

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## Foreword

This document (EN 50125-1:2014) has been prepared by CLC/SC 9XB "Electromechanical material on board rolling stock" of CLC/TC 9X "Electrical and electronic applications for railways".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-02-24
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-02-24

This document supersedes EN 50125-1:1999.

EN 50125-1:2014 is a revision of EN 50125-1:1999 with an extended scope to cover mechanical requirements, as requested by the European Railway Agency (ERA).

EN 50125 is divided into the following parts:

- EN 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Rolling stock and on-board equipment* (the present document).
- EN 50125-2 *Railway applications — Environmental conditions for equipment — Part 2: Fixed electrical installations.*
- EN 50125-3 *Railway applications — Environmental conditions for equipment — Part 3: Equipment for signalling and telecommunications.*

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

## 1 Scope

This European Standard intends to define environmental conditions within Europe.

NOTE 1 It can also be applied elsewhere by agreement.

The scope of this European Standard covers the definitions and ranges of the following parameters:

Altitude, temperature, humidity, air movement, rain, snow and hail, ice, solar radiation, lightning, pollution for rolling stock and on-board equipment (mechanical, electromechanical, electrical, electronic).

In particular, this European Standard defines interface conditions between the vehicle and its environment. The defined environmental conditions are considered as normal in service.

NOTE 2 Further guidance on severe conditions can be found within prCEN/TR 16251.

Rolling stock or parts of it can also be used outside the specification with reduced performance.

NOTE 3 In these cases, relevant operating rules could be necessary to ensure the technical compatibility between the rolling stock and environmental conditions.

Microclimates surrounding components may be defined by relevant product standards or by special requirements. Passenger effects on the equipment and equipment effects on the passengers are not considered in this European Standard.

This European Standard does not apply to cranes, mining vehicles, cable cars. This European Standard also does not apply to natural disaster (e.g. earthquake).

## 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 14067-6, *Railway applications — Aerodynamics — Part 6: Requirements and test procedures for cross wind assessment*

EN 50124-2, *Railway applications — Insulation coordination — Part 2: Overvoltages and related protection*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN 60721-3-5, *Classification of environmental conditions — Part 3: Classification of groups of environmental parameters and their severities — Section 5: Ground vehicle installations (IEC 60721-3-5)*

HD 478.2.3 S1, *Classification of environmental conditions — Part 2: Environmental conditions appearing in nature — Air pressure (IEC 60721-2-3)*

## 3 Terms and definitions

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

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