

Railway applications - Infrastructure - Performance requirements of rail fastening systems for tramways

## EESTI STANDARDI EESSÕNA

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English Version

## Railway applications - Infrastructure - Performance requirements of rail fastening systems for tramways

Applications ferroviaires - Infrastructure - Exigences  
de performance relatives aux systèmes de fixation de  
rail pour tramways

Bahnanwendungen - Infrastruktur -  
Leistungsanforderungen für  
Schienenbefestigungssysteme für Straßenbahnen

This European Standard was approved by CEN on 20 April 2020.

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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 17319:2020) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, 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of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.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 is supported by the test methods in the series EN 13146 “*Railway applications – Track – Test methods for fastening systems*”.

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.

## 1 Scope

This document is applicable to fastening systems used with grooved rails for tram, urban rail and industrial tracks, with maximum design axle loads and minimum curve radii in accordance with Table 1.

This document is for type approval of a complete fastening assembly only.

**Table 1 — Fastening category criteria**

<b>Fastening category</b>	<b>Maximum design axle load</b> kN	<b>Minimum curve radius</b> m
A+	130	18
A	130	40
B	180	80
NOTE The maximum axle load limit does not apply to maintenance vehicles		

The requirements apply to fastening systems for the grooved rail profiles in EN 14811 which act on the foot and/or web of the rail.

This document is not applicable to fastening systems for other rail sections or special fastening systems used at bolted joints or glued joints or in switches and crossings for grooved rails.

NOTE Requirements for fastenings for use with Vignole rails are included in the EN 13481 series of standards.

## 2 Normative references

The following documents are referred to in 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 13146-1:2017, *Railway applications – Track – Test methods for fastening systems – Part 1: Determination of longitudinal restraint*

EN 13146-4:2012+A1:2014, *Railway applications - Track - Test methods for fastening systems - Part 4: Effect of repeated loading*

EN 13146-6:2012, *Railway applications - Track - Test methods for fastening systems - Part 6: Effect of severe environmental conditions*

EN 13146-7:2012, *Railway applications – Track – Test methods for fastening systems – Part 7: Determination of clamping force and uplift stiffness*

EN 13146-9:2009+A1:2011, *Railway applications – Track – Test methods for fastening systems – Part 9: Determination of stiffness*

EN 13146-10, *Railway applications - Track - Test methods for fastening systems - Part 10: Proof load test for pull-out resistance*

EN ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system (ISO 7500-1)*