



SLOVENSKI STANDARD
SIST-TP CEN/TR 18048:2024

01-april-2024

**Metode določanja mehanskih lastnosti samolepilnih premaznih sklopov,
povezanih z neorientiranimi električnimi jekli**

Methods of determination of the mechanical properties of self-bonding coating assemblies related to non-oriented electrical steels

Verfahren zur Bestimmung der mechanischen Eigenschaften von Backlackverbunden bezogen auf nicht kornorientiertes Elektrobund und -blech

Méthodes de détermination des caractéristiques mécaniques des assemblages à base de vernis thermocollant dédiés aux aciers électriques à grains non orientés

Ta slovenski standard je istoveten z: CEN/TR 18048:2024

[SIST-TP CEN/TR 18048:2024](https://standards.slovenski-institut.si/standards/sist/842001/TP/18048-2024)

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ICS:

77.140.50	Ploščati jekleni izdelki in polizdelki	Flat steel products and semi-products
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TECHNICAL REPORT

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English Version

Methods of determination of the mechanical properties of self-bonding coating assemblies related to non-oriented electrical steels

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (CEN/TR 18048:2024) has been prepared by Technical Committee CEN/TC 459/SC 8 “Steel sheet and strip for electrical applications”, the secretariat of which is held by DIN.

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CEN/TR 18048:2024 (E)

Introduction

EN 10342 describes the electrical steel coating types. The electrical steels ordered according to standards EN 10106, EN 10265, EN 10303, EN 10341 are supplied either with or without such a coating. CEN/TR 18048 describes the measurements necessary to qualify these coatings.

The particular case of self-bonding coatings (also called bondable coatings) have as additional specification, beyond providing an insulation layer, to assure a glued connection between superposed laminations. This implies the strength of this bonded assembly needs to be assessed, for qualification purposes. This multi-material assembly needs specific precautions for establishing its mechanical strength level. Different standards exist, but these are not necessarily dedicated to electrical steel coatings. The lack of a clear description of which evaluation method to use, with which calibration methods, sample preparation, etc. brings inconsistency in obtained measurement results. The purpose of this technical report is to overcome the problem of differences in mechanical assessment of self-bonding coating assemblies, by combining the aspects of Non-Oriented Electrical Steel self-bonding coating mechanical testing in a clear guideline. This does not involve the mechanical testing of the coating itself, nor the mechanical testing of the electrical steel itself.

These self-bonding coating types are used in different electric machine applications such as: wind generators, high efficiency industry machines, automotive traction motors.

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