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Standards

Irish Standard  
I.S. EN 10049:2013

# Measurement of roughness average Ra and peak count RPc on metallic flat products

## I.S. EN 10049:2013

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

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

*This document replaces:*  
EN 10049:2005

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English Version

## Measurement of roughness average $R_a$ and peak count $RP_c$ on metallic flat products

Mesure de la rugosité moyenne  $R_a$  et du nombre de pics  $RP_c$  sur les produits plats métalliques

Messung des arithmetischen Mittenrauwertes  $R_a$  und der Spitzenzahl  $RP_c$  an metallischen Flacherzeugnissen

This European Standard was approved by CEN on 29 August 2013.

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.



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## Foreword

This document (EN 10049:2013) has been prepared by Technical Committee ECISS/TC 109 “Flat products for cold working - Qualities, dimensions, tolerances and specific tests”, the secretariat of which is held by AFNOR.

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 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

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

This document supersedes EN 10049:2005.

The whole document was technically revised.

The European Committee for Iron and Steel Standardization (ECISS) has given Technical Committee 109 (Secretariat France) the task to prepare a European Standard on the measuring of roughness as a revision of EN 10049:2005.

The reason for the existence of this European Standard is that general roughness measurement rules as described in ISO standards (see Clause 2) are not practical for metallic flat products for the following reasons:

- the practical use of EN ISO 4288 is not convenient for flat products, because the choice of the cut-off ( $\lambda c$ ) is dependent on the  $Ra$  to be measured; the product range is quite wide and the transition point for  $Ra$  is  $2 \mu\text{m}$  in EN ISO 4288 (EN ISO stipulates a cut-off ( $\lambda c$ ) of  $0,8 \text{ mm}$  for  $Ra < 2\mu\text{m}$  and a cut-off ( $\lambda c$ ) of  $2,5 \text{ mm}$  for  $Ra > 2\mu\text{m}$ );
- in the automotive industry, the use of a cut-off ( $\lambda c$ ) of  $2,5 \text{ mm}$  is based on requirements related to paint appearance.

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.

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