# Aluminium and aluminium alloys -Special requirements for anodised products for use in contact with foodstuff

Aluminium and aluminium alloys - Special requirements for anodised products for use in contact with foodstuff



# **EESTI STANDARDI EESSÕNA**

# **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN
14392:2007 sisaldab Euroopa standardi
EN 14392:2007 ingliskeelset teksti.

Käesolev dokument on jõustatud 18.12.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 14392:2007 consists of the English text of the European standard EN 14392:2007.

This document is endorsed on 18.12.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

# Käsitlusala:

This European Standard specifies specific requirements for coloured or uncoloured anodic oxidation coatings on wrought and cast products in aluminium and aluminium alloys for use in contact with food. These specific requirements cover the chemical composition of the bath, the sealing and the properties of the obtained anodic oxidation coatings. They do not cover dyestuffs and pigments but do cover the metallic deposits produced by electrolytic colouring.

# Scope:

This European Standard specifies specific requirements for coloured or uncoloured anodic oxidation coatings on wrought and cast products in aluminium and aluminium alloys for use in contact with food. These specific requirements cover the chemical composition of the bath, the sealing and the properties of the obtained anodic oxidation coatings. They do not cover dyestuffs and pigments but do cover the metallic deposits produced by electrolytic colouring.

ICS 67.250, 77.150.10

**Võtmesõnad:** area, food- container c, light metals, metallurgical industry, non ferrous alloys, non-ferrous, oxide coatings, products, quality, quality assurance, quality requirements, specification (approval), specifications, surface treatment, surfaces, testing, wrought alloys

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 14392

November 2007

ICS 77.150.10; 67.250

#### **English Version**

# Aluminium and aluminium alloys - Requirements for anodised products for use in contact with foodstuff

Aluminium et alliages d'aluminium - Spécifications pour les produits anodisés destinés à entrer en contact avec les aliments

Aluminium und Aluminiumlegierungen - Anforderungen an anodisierte Erzeugnisse, die in Kontakt mit Lebensmitteln kommen

This European Standard was approved by CEN on 15 June 2007.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword	
	ર
Scope	
Normative references	
Terms and definitions	
Ordering information	
Chemical composition of the aluminium or aluminium alloy	
Chemical composition of the anodization bath	
Sealing	
.1 General	5
.2 Composition of the sealing bath	
.4 Quality assurance and quality assessment	
Demonstration of conformity with the present standard	
Annex A (informative) A-deviations	8

# **Foreword**

This document (EN 14392:2007) has been prepared by Technical Committee CEN/TC 132 "Aluminium and aluminium alloys", the secretariat of which is held by AFNOR.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2008 and conflicting national standards shall be withdrawn at the latest by May 2008.

Within its programme of work, Technical Committee CEN/TC 132 has entrusted CEN/TC 132/WG 9 to prepare the following standard:

EN 14392, Aluminium and aluminium alloys — Requirements for anodised products for use in contact with foodstuff.

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.

CEN/TC 132 affirms it is its policy that in the case when a patentee refuses to grant licenses on standardised standard products under reasonable and not discriminatory conditions, then this product shall be removed from the corresponding standard.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

# 1 Scope

This European Standard specifies requirements for coloured or uncoloured anodic oxidation coatings on wrought and cast products in aluminium and aluminium alloys for use in contact with food.

These requirements cover the chemical composition of the bath, the sealing and the properties of the obtained anodic oxidation coatings. They do not cover dyestuffs and pigments but do cover the metallic deposits produced by electrolytic colouring.

# 2 Normative references

The following referenced documents are indispensable for the application 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 601, Aluminium and aluminium alloys — Castings — Chemical composition of castings for use in contact with foodstuff

EN 602, Aluminium and aluminium alloys — Wrought products — Chemical composition of semi products used for the fabrication of articles for use in contact with foodstuff

EN 10204, Metallic products — Types of inspection documents

EN 12258-1:1998, Aluminium and aluminium alloys — Terms and definitions — Part 1: General terms

EN 12373-1, Aluminium and aluminium alloys — Anodizing — Part 1: Method for specifying decorative and protective anodic oxidation coatings on aluminium

EN 12373-4, Aluminium and aluminium alloys — Anodizing — Part 4: Estimation of loss of absorptive power of anodic oxidation coatings after sealing by dye spot test with prior acid treatment

EN 12373-5, Aluminium and aluminium alloys — Anodizing — Part 5: Assessment of quality of sealed anodic oxidation coatings by measurement of admittance

EN 12373-7, Aluminium and aluminium alloys — Anodizing — Part 7: Assessment of quality of sealed anodic oxidation coatings by measurement of the loss of mass after immersion in phosphoric acid/chromic acid solution with prior acid treatment

# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12258-1:1998 and the following apply.

#### 3.1

#### anodic oxidation coating

coating obtained by an electrolytic oxidation process, having protective, decorative or functional properties

#### 3.2

# sealing

treatment of anodic oxide coating to reduce porosity and the absorption capacity of the coating by hydrothermal processes carried out after anodising