

**Aerospace series - Test methods -  
Titanium and titanium alloys - Part 009:  
Determination of surface contamination**

Aerospace series - Test methods - Titanium and  
titanium alloys - Part 009: Determination of surface  
contamination

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 2003-009:2007 sisaldab Euroopa standardi EN 2003-009:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 31.05.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 2003-009:2007 consists of the English text of the European standard EN 2003-009:2007.</p> <p>This document is endorsed on 31.05.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This standard specifies two methods of determining surface contamination caused by an <math>\alpha</math>-stabilizer on titanium and titanium alloys, for aerospace applications.</p>	<p><b>Scope:</b></p> <p>This standard specifies two methods of determining surface contamination caused by an <math>\alpha</math>-stabilizer on titanium and titanium alloys, for aerospace applications.</p>
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English Version

Aerospace series - Test methods - Titanium and titanium alloys -  
Part 009: Determination of surface contamination

Série aérospatiale - Méthodes d'essais - Titane et alliages  
de titane - Partie 009 : Détermination de la contamination  
de surface

Luft- und Raumfahrt - Prüfverfahren - Titan und  
Titanlegierungen - Teil 009: Bestimmung der  
Oberflächenverunreinigung

This European Standard was approved by CEN on 5 October 2006.

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## Foreword

This document (EN 2003-009:2007) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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## Introduction

Contamination caused by an  $\alpha$ -stabilizer occurs in an environment containing oxygen, nitrogen or carbon when the product surface reaches a temperature which allows these elements to diffuse into the product surface. It leads to the formation of an  $\alpha$ -stabilized surface which is hard and brittle, seldom exceeding 0,2 mm and is detrimental to the product.

## 1 Scope

This standard specifies two methods of determining surface contamination caused by an  $\alpha$ -stabilizer on titanium and titanium alloys, for aerospace applications.

## 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 2002-7, *Aerospace series — Metallic materials — Test methods — Part 7: Hardness test.* <sup>1)</sup>

EN 3114-001, *Aerospace series — Test method — Microstructure of ( $\alpha + \beta$ ) titanium alloy wrought products — Part 001: General requirements.*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 3114-001 apply.

## 4 Principle

Determination of surface contamination is carried out by:

— micrographic examination (Method A);

or

— hardness testing (Method B).

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1) Published as ASD Prestandard at the date of publication of this standard.