



# SLOVENSKI STANDARD

## SIST EN 2545-2:2001

01-januar-2001

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### Aerospace series - Titanium and titanium alloy remelting stock and castings - Technical specification - Part 2: Remelting stock

Aerospace series - Titanium and titanium alloy remelting stock and castings - Technical  
specification - Part 2: Remelting stock

Luft- und Raumfahrt - Vormaterial und Gußstücke aus Titan und Titanlegierungen -  
Technische Lieferbedingungen - Teil 2: Vormaterial

Série aérospatiale - Produits pour refusion et pièces moulées en titane et alliages de  
titane - Spécification technique - Partie 2: Produits pour refusion

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Ta slovenski standard je istoveten z: EN 2545-2:1995

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#### ICS:

49.025.30 Titan Titanium

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EUROPEAN STANDARD

EN 2545-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 1995

ICS 49.040.10

Descriptors: aircraft industry, titanium, titanium alloy, forging, casting, melting, specification

English version

**Aerospace series - Titanium and titanium alloy  
remelting stock and castings - Technical  
specification - Part 2: Remelting stock**

Série aérospatiale - Produits pour refusion et  
pièces moulées en titane et alliages de titane  
- Spécification technique - Partie 2: Produits  
pour refusion

Luft- und Raumfahrt - Vormaterial und Gußstücke  
aus Titan und Titanlegierungen - Technische  
Lieferbedingungen - Teil 2: Vormaterial

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This European Standard was approved by CEN on 1994-11-25. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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## CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Ref. No. EN 2545-2:1995 E

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..... Foreword .....

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the member countries of AECMA, 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 November 1995, and conflicting national standards shall be withdrawn at the latest by November 1995.

According to CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope and field of application

This standard specifies the particular requirements for remelting stock intended for the manufacture of titanium and titanium alloy castings.

This standard shall be used in conjunction with EN 2545-1.

## 2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2002-1	Aerospace series - Test methods for metallic materials - Part 1 : Tensile testing at ambient temperature <sup>1)</sup>
EN 2002-2	Aerospace series - Test methods for metallic materials - Part 2 : Tensile testing at elevated temperature <sup>1)</sup>
EN 2002-5	Aerospace series - Test methods for metallic materials - Part 5 : Uninterrupted creep and rupture testing <sup>1)</sup>
EN 2545-1	Aerospace series - Titanium and titanium alloy remelting stock and castings - Technical specification - Part 1 : General requirements

## 3 Manufacture

SIST EN 2545-2:2001

The sponge and additions shall be obtained from suppliers approved by the remelting stock manufacturer.

Unless otherwise agreed between the manufacturer and the purchaser, only approved wrought scrap shall be used. It shall consist of the remelting stock manufacturer's own scrap or scrap from an approved reprocessing plant.

Unless otherwise agreed between manufacturer and purchaser, the use of machining chips obtained from external source is forbidden.

Melting shall be carried out under vacuum.

Charges containing titanium sponge shall be multiple melted.

Remelting stock shall be manufactured from a charge made from :

- virgin materials (sponge + alloying elements) or
- virgin materials plus a defined and constant percentage of approved scrap up to 70 % or
- virgin materials and/or approved scrap at the option of the manufacturer. This composition shall be applied unless otherwise specified on the order or manufacturing schedule.

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

#### 4 Dimensions and tolerances

The form, mass, dimensions and tolerances shall be defined by agreement between the manufacturer and the purchaser.

The frequency of examination adopted by the manufacturer shall be sufficient to permit him to certify compliance with the requirements.

#### 5 Internal defects

No defects prejudicial to the intended use.

Unless otherwise agreed between the manufacturer and the purchaser and stated on the order or inspection schedule, test methods and acceptance criteria shall be at the option of the manufacturer.

The frequency of examination adopted by the manufacturer shall be sufficient to permit him to certify compliance with the requirements.

#### 6 External defects

The visual inspection shall not reveal any surface contamination or foreign matter including paint, other than that approved for marking.

The frequency of examination adopted by the manufacturer shall be sufficient to permit him to certify compliance with the requirements.

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#### 7 Chemical composition

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See EN 2545-1.

#### 8 Provision of test samples

Sufficient test samples shall be provided and prepared from each batch in accordance with the requirements of EN 2545-1 for the tests required by the material standard or inspection schedule.

#### 9 Mechanical testing

When specified on the material standard, tensile, creep rupture or creep tests shall be made at a frequency of one test per batch and in accordance with :

- EN 2002-1 for tensile testing at room temperature;
- EN 2002-2 for tensile testing at elevated temperature;
- EN 2002-5 for creep and creep rupture testing.

The result shall comply with the requirements of the material standard.

**10 Marking**

Unless otherwise specified on the order, all products shall bear the following marking :

- material standard number;
- parent-cast number,
- identification of the manufacturer and plant,
- such other marking as will ensure full identification.

The method of marking shall be at the option of the manufacturer provided the marking is permanent.

Table 1 - Summary of requirements

Requirements	Clause	Product	Inspection/Testing		
			Method	Standard	Frequency
Dimensions	4	All	Appropriate	-	See 4
Internal defects	5	All	See 5	-	See 5
External defects	6	All	Visual	-	See 6
Chemical composition	7	All	See 7	-	One per parent-cast
Mechanical properties at room temperature	9	If required	Tensile test at room temperature	EN 2002-1	One per batch
Mechanical properties at room temperature	9	If required	Tensile test at elevated temperature	EN 2002-2	One per batch
Creep and creep rupture properties	9	If required	Creep test	EN 2002-5	One per batch
Marking	10	All	Visual	-	See EN 2545-1