



# SLOVENSKI STANDARD

## SIST EN 4637:2010

01-julij-2010

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### Aeronavtika - Peskalna sredstva - Beli korund

Aerospace series - Blast media - White corundum

Luft- und Raumfahrt - Strahlmittel - Edelkorund, weiß

Série aérospatiale - Produit de projetage - Corindon blanc

Ta slovenski standard je istoveten z: **EN 4637:2010**

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#### **ICS:**

49.040	Prevleke in z njimi povezani postopki, ki se uporabljajo v letalski in vesoljski industriji	Coatings and related processes used in aerospace industry
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 4637**

April 2010

ICS 49.040

English Version

## Aerospace series - Blast media - White corundum

Série aérospatiale - Produit de projetage - Corindon blanc

Luft- und Raumfahrt - Strahlmittel - Edelkorund, weiß

This European Standard was approved by CEN on 6 January 2010.

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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, Croatia, 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.

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COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (EN 4637:2010) 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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.

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, Croatia, 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 the United Kingdom.

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## EN 4637:2010 (E)

### 1 Scope

This standard specifies the characteristics of white corundum used as blast media 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.

ISO 565, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings*

ISO 8486-1, *Bonded abrasives — Determination and designation of grain size distribution — Part 1: Macrogrits F4 to F220*

ISO 8486-2, *Bonded abrasives — Determination and designation of grain size distribution — Part 2: Microgrits F230 to F2000*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1**  
 **$d_{s3}$  max.**  
the grain size (theoretical grain diameter) must not exceed the maximum permissible  $d_{s3}$ -value at the 3 % point of the grain size distribution curve

**3.2**  
 **$d_{s50}$**   
the median grain size (theoretical grain diameter) must be within the specified tolerances of the  $d_{s50}$ -value at the 50 % point of the grain size distribution curve

**3.3**  
 **$d_{s94}$  min.**  
the grain size (theoretical grain diameter) must at least attain the  $d_{s94}$ -value at the 94 % point of the grain size distribution curve

### 4 Characteristics

The characteristics for each product are specified in the following annexes.

## Annex A (normative)

### Characteristics of corundum

<b>DESIGNATION:</b> White corundum F 12 <b>GRAIN SIZE:</b> 1,20 mm to 2,80 mm	<b>Main use:</b>  (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:** - Alumina  $\geq 99$  %  
- Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** [SIST EN 4637:2010](https://standards.iteh.ai/catalog/standards/sist/4b5ac1cd-03cb-4bfl-9eff-51c4c12ac31/sist-en-4637-2010) Angular and massive grain
- 5 **HARDNESS** (typical values): [SIST EN 4637:2010](https://standards.iteh.ai/catalog/standards/sist/4b5ac1cd-03cb-4bfl-9eff-51c4c12ac31/sist-en-4637-2010) 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
9 (Mohs hardness)
- 6 **DENSITY:** - True with pycnometer  
-  $\geq 3\,940$  kg/m<sup>3</sup>
- 7 **GRAIN SIZE DISTRIBUTION:**

		GRAIN SIZE DISTRIBUTION ISO 565		
<b>TEST SIEVES - APERTURE</b>	2,80 mm	2 mm	1,40 mm	
<b>% RESIDUE</b>	0	$\leq 20$	$\geq 70$	
<b>TEST SIEVES - APERTURE</b>	1,20 mm			
<b>% REMAINDER</b>	$\leq 3$			

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).
- 9 **SPECIAL INSTRUCTIONS:** None.

## EN 4637:2010 (E)

<b>DESIGNATION:</b> White corundum F 14 <b>GRAIN SIZE:</b> 1 mm to 2,40 mm	<b>Main use:</b> (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:**  
 - Alumina  $\geq 99$  %  
 - Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** Angular and massive grain
- 5 **HARDNESS** (typical values):  
 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
 9 (Mohs hardness)
- 6 **DENSITY:** True with pycnometer  
 -  $\geq 3\,940$  kg/m<sup>3</sup>
- 7 **GRAIN SIZE DISTRIBUTION:**

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GRAIN SIZE DISTRIBUTION ISO 565			
<b>TEST SIEVES - APERTURE</b>	2,40 mm	1,70 mm	1,20 mm
<b>% RESIDUE</b>	0	$\leq 20$	$\geq 70$
<b>TEST SIEVES - APERTURE</b>	1 mm		
<b>% REMAINDER</b>	$\leq 3$		

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).
- 9 **SPECIAL INSTRUCTIONS:** None.



<b>DESIGNATION:</b> White corundum F 16 <b>GRAIN SIZE:</b> 850 µm to 2 mm	<b>Main use:</b> (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:**  
 - Alumina  $\geq 99$  %  
 - Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** Angular and massive grain
- 5 **HARDNESS** (typical values):  
 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
 9 (Mohs hardness)
- 6 **DENSITY:** True with pycnometer  
 -  $\geq 3\,940$  kg/m<sup>3</sup>
- 7 **GRAIN SIZE DISTRIBUTION:**

GRAIN SIZE DISTRIBUTION ISO 565			
<b>TEST SIEVES - APERTURE</b>	2 mm	1,40 mm	1 mm
<b>% RESIDUE</b>	0	$\leq 20$	$\geq 70$
<b>TEST SIEVES - APERTURE</b>	850 µm		
<b>% REMAINDER</b>	$\leq 3$		

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).
- 9 **SPECIAL INSTRUCTIONS:** None.

## EN 4637:2010 (E)

<b>DESIGNATION:</b> White corundum F 20 <b>GRAIN SIZE:</b> 710 µm to 1,70 mm	<b>Main use:</b> (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:** - Alumina  $\geq 99$  %  
- Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** Angular and massive grain
- 5 **HARDNESS** (typical values): 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
9 (Mohs hardness)
- 6 **DENSITY:** True with pycnometer  
-  $\geq 3\,940$  kg/m<sup>3</sup>

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- 7 **GRAIN SIZE DISTRIBUTION:** <https://standards.itech.ai/catalog/standards/sist/4b5ac1cd-03cb-4bfl-9eff-f6bc4c12ac31/sist-en-4637-2010>

GRAIN SIZE DISTRIBUTION ISO 565			
<b>TEST SIEVES - APERTURE</b>	1,70 mm	1,18 mm	850 µm
<b>% RESIDUE</b>	0	$\leq 20$	$\geq 70$
<b>TEST SIEVES - APERTURE</b>	710 µm		
<b>% REMAINDER</b>	$\leq 3$		

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).

- 9 **SPECIAL INSTRUCTIONS:** None.

<b>DESIGNATION:</b> White corundum F 22 <b>GRAIN SIZE:</b> 600 µm to 1,40 mm	<b>Main use:</b> (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:**  
 - Alumina  $\geq 99$  %  
 - Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** Angular and massive grain
- 5 **HARDNESS** (typical values):  
 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
 9 (Mohs hardness)
- 6 **DENSITY:** True with pycnometer  
 -  $\geq 3\,940$  kg/m<sup>3</sup>
- 7 **GRAIN SIZE DISTRIBUTION:**

GRAIN SIZE DISTRIBUTION ISO 565			
<b>TEST SIEVES - APERTURE</b>	1,40 mm	1 mm	710 µm
<b>% RESIDUE</b>	0	$\leq 20$	$\geq 70$
<b>TEST SIEVES - APERTURE</b>	600 µm		
<b>% REMAINDER</b>	$\leq 3$		

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).
- 9 **SPECIAL INSTRUCTIONS:** None.

## EN 4637:2010 (E)

<b>DESIGNATION:</b> White corundum F 24 <b>GRAIN SIZE:</b> 500 µm to 1,18 mm	<b>Main use:</b> (for information) – Surface preparation – Surface reconditioning
<b>DESCRIPTION:</b> fused aluminium oxide <b>ASPECT:</b> <b>MATERIAL:</b> Ground corundum <b>COLOUR:</b> White	

- 1 **ORIGIN:** Artificial
- 2 **CHEMICAL COMPOSITION:** - Alumina  $\geq 99$  %  
- Free silica  $< 0,1$  %
- 3 **CONTROLLED CHEMICAL COMPONENTS:** None
- 4 **GRAIN SHAPE:** Angular and massive grain
- 5 **HARDNESS** (typical values): 2 100 kg/mm<sup>2</sup> (Knoop hardness)  
9 (Mohs hardness)
- 6 **DENSITY:** True with pycnometer  
-  $\geq 3\,940$  kg/m<sup>3</sup>
- 7 **GRAIN SIZE DISTRIBUTION:** [SIST EN 4637:2010](https://standards.iteh.ai/catalog/standards/sist/4b5ac1cd-03cb-4bfl-9eff-f6bc4c12ac31/sist-en-4637-2010)

GRAIN SIZE DISTRIBUTION ISO 565			
TEST SIEVES - APERTURE	1,18 mm	850 µm	600 µm
% RESIDUE	0	$\leq 25$	$\geq 65$
TEST SIEVES - APERTURE	500 µm		
% REMAINDER	$\leq 3$		

- 8 **METHOD OF DETERMINATION OF GRAIN SIZE DISTRIBUTION:** according to ISO 8486-1 (for sampling methods, see Annexes B and C of this standard).
- 9 **SPECIAL INSTRUCTIONS:** None.