SLOVENSKI STANDARD
SIST EN 4638:2010

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Aeronavtika - Peskalna sredstva - Rjavi korund, brez železa

Aerospace series - Blast media - Brown corundum, without iron

Luft- und Raumfahrt - Strahlmittel - Normalkorund, braun, eisenfrei

Série aérospatiale - Produit de projetage - Corindon brun sans fer

Ta slovenski standard je istoveten z: **EN 4638:2010**

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

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English Version

Aerospace series - Blast media - Brown corundum, without iron

Série aérospatiale - Produit de projetage - Corindon brun sans fer

Luft- und Raumfahrt - Strahlmittel - Normalkorund, braun, eisenfrei

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Foreword

This document (EN 4638:2010) 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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1 Scope

This standard specifies the characteristics of brown corundum without iron 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*

3 Characteristics

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

Annex A
(normative)

Characteristics of corundum

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

1 **ORIGIN:** Artificial

2 **CHEMICAL COMPOSITION:**
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 **CONTROLLED CHEMICAL COMPONENTS:** None

4 **GRAIN SHAPE:** Angular and massive grain

5 **HARDNESS** (typical values)**:**
2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 **DENSITY:**
- True with pyknometer
- ≥ 3 940 kg/m^3

7 **GRAIN SIZE DISTRIBUTION:**

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	2,80 mm	2 mm	1,40 mm
% RESIDUE	0	≤ 20	≥ 70
TEST SIEVES - APERTURE	1,20 mm		
% REMAINDER	≤ 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.

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

1 **ORIGIN:** Artificial

2 **CHEMICAL COMPOSITION:**
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 **CONTROLLED CHEMICAL COMPONENTS:** None

4 **GRAIN SHAPE:** Angular and massive grain

5 **HARDNESS** (typical values)**:** 2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 **DENSITY:**
- True with pyknometer
- ≥ 3 940 kg/m^3

7 **GRAIN SIZE DISTRIBUTION:**

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	2,40 mm	1,70 mm	1,20 mm
% RESIDUE	0	≤ 20	≥ 70
TEST SIEVES - APERTURE	1 mm		
% REMAINDER	≤ 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.

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

1 **ORIGIN:** Artificial

2 **CHEMICAL COMPOSITION:**
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 **CONTROLLED CHEMICAL COMPONENTS:** None

4 **GRAIN SHAPE:** Angular and massive grain

5 **HARDNESS** (typical values): 2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 **DENSITY:**
- True with pyknometer
- ≥ 3 940 kg/m^3

7 **GRAIN SIZE DISTRIBUTION:**

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	2 mm	1,40 mm	1 mm
% RESIDUE	0	≤ 20	≥ 70
TEST SIEVES - APERTURE	850 µm		
% REMAINDER	≤ 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.

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

1 **ORIGIN:** Artificial

2 **CHEMICAL COMPOSITION:**
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 **CONTROLLED CHEMICAL COMPONENTS:** None

4 **GRAIN SHAPE:** Angular and massive grain

5 **HARDNESS** (typical values)**:** 2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 **DENSITY:**
- True with pyknometer
- ≥ 3 940 kg/m^3

7 **GRAIN SIZE DISTRIBUTION:**

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	1,70 mm	1,18 mm	850 µm
% RESIDUE	0	≤ 20	≥ 70
TEST SIEVES - APERTURE	710 µm		
% REMAINDER	≤ 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.

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

1 **ORIGIN:** Artificial

2 **CHEMICAL COMPOSITION:**
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 **CONTROLLED CHEMICAL COMPONENTS:** None

4 **GRAIN SHAPE:** Angular and massive grain

5 **HARDNESS** (typical values): 2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 **DENSITY:** - True with pyknometer
- ≥ 3 940 kg/m^3

7 **GRAIN SIZE DISTRIBUTION:**

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	1,40 mm	1 mm	710 µm
% RESIDUE	0	≤ 20	≥ 70
TEST SIEVES - APERTURE	600 µm		
% REMAINDER	≤ 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.

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

1 ORIGIN: Artificial

2 CHEMICAL COMPOSITION:
- Alumina ≥ 94 %
- Titanium oxide ≥ 2,5 %
- Iron oxide < 0,2 %
- Free silica < 1,5 %

3 CONTROLLED CHEMICAL COMPONENTS: None

4 GRAIN SHAPE: Angular and massive grain

5 HARDNESS (typical values)**:** 2 100 kg/mm^2 (Knoop hardness)
9 (Mohs hardness)

6 DENSITY:
- True with pyknometer
- ≥ 3 940 kg/m^3

7 GRAIN SIZE DISTRIBUTION:

	GRAIN SIZE DISTRIBUTION ISO 565		
TEST SIEVES - APERTURE	1,18 mm	850 µm	600 µm
% RESIDUE	0	≤ 25	≥ 65
TEST SIEVES - APERTURE	500 µm		
% REMAINDER	≤ 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.