

AMPERIT[®] 831

Chemical Formula	ZrO ₂ -Y ₂ O ₃ 93-7
Chemical Name	Zirconium Oxide-Yttrium Oxide 93-7
Description of Product	Plasma Spheroidized (Hollow Sphere)
Particle Sizes Available	Product Designation
	AMPERIT [®] 831.006 125/45 μm
	AMPERIT [®] 831.082 125/10 μm
	AMPERIT [®] 831.007 90/16 μm
	AMPERIT [®] 831.063 75/45 μm
	AMPERIT [®] 831.054 45/10 μm

Chemical Characteristics

(Mass fraction in % [cg/g]; ppm [μg/g])

Y ₂ O ₃	7.0 - 8.0 %
HfO ₂	max. 2.5 %
SiO ₂	max. 0.05 %
Al ₂ O ₃	max. 0.02 %
TiO ₂ max.	0.02%
Fe ₂ O ₃	max. 0.02 %
CaO	max. 0.05 %
MgO	max. 0.02 %
Th+U	max. 0.02 %

Physical Characteristics

Phase Constitution ¹⁾	max. 10 % monoclinic ZrO ₂
Particle Size Distribution ²⁾	831.006 831.082 831.007
- 176 μm	100 % 100 % 100 %
D 90 %	107 - 125 μm 95 - 108 μm 85 - 99 μm
D 50 %	68 - 77 μm 50 - 60 μm 47 - 57 μm
D 10 %	39 - 49 μm 20 - 27 μm 20 - 30 μm
Apparent Density ³⁾	2.0 - 2.4 g/cm ³ 2.1 - 2.5 g/cm ³ 2.1 - 2.5 g/cm ³
Flowability ⁴⁾	< 60 sec/50g < 60 sec/50g < 60 sec/50g

1) X-Ray Diffraction (PWA, Dirats), 2) MICROTRAC by Laser Light Diffraction per ASTM C 1070, 3) HALL FLOWMETER FUNNEL per ASTM B 212 4) HALL FLOWMETER FUNNEL per ASTM B 213.

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Particle Size Distribution²⁾ **831.063**

- 88 μm
+ 75 μm ⁶⁾ 5 %
- 45 μm ⁶⁾ 10 %

D 90 %
D 50 %
D 10 %

Apparent Density³⁾ 2.0 - 2.4 g/cm³

Flowability⁴⁾ < 60 sec/50g

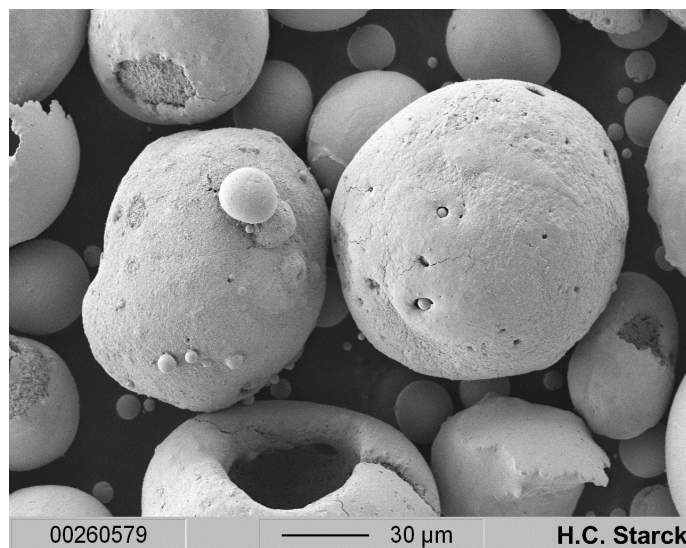
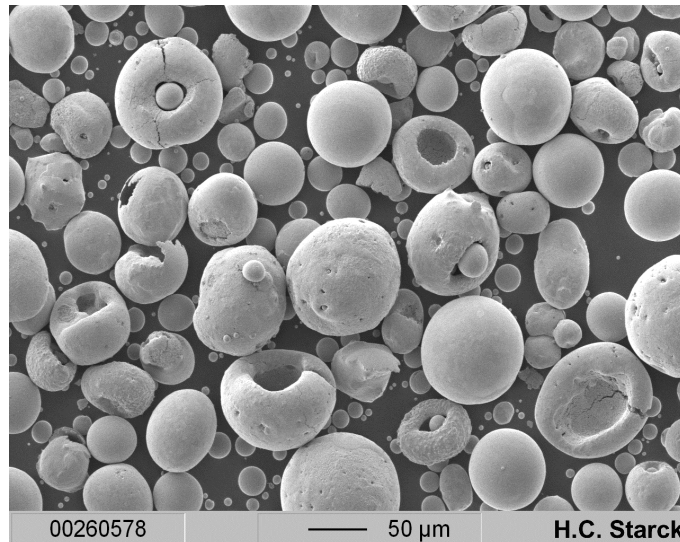
831.054

min. 98 %

54 - 66 μm
32 - 42 μm
15 - 20 μm

2.2 - 2.6 g/cm³

SEM picture⁵⁾



2) MICROTRAC by Laser Light Diffraction per ASTM C 1070, 3) HALL FLOWMETER FUNNEL per ASTM B 212 4) HALL FLOWMETER FUNNEL per ASTM B 213, 5) Secondary Electron Image (SEI), 6) ROTAP Screening per ASTM B 214.

Packaging	Standard Packaging 5 kg in one 2.5 l PE bottle, 6 bottles (30 kg) in one cardboard box.
Storage and Handling	Storage and handling are subject to the rules and regulations in the country of use.
Hazards identification in Advertising (REGULATION (EC) No 1272/2008 Article 48)	None.
Documentation	An inspection document in accordance with EN 10204 is supplied with every shipment.
Remarks	Always mix well before using.

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