

# TECHNICAL DATA SHEET

Date of Issue: 2016/09/02

## Zirconium Metal powder, Grade GH, aqueous suspension

CAS-No. 7440-67-7

EC-No. 231-176-9

Molecular Formula Zr

Product Number 453121

### APPLICATION

For the manufacture of highly effective getters, usually activated by dehydration; as a zirconium component in powder metallurgy; for flares and tracers in pyrotechnics.

### FURTHER INGREDIENTS

Hafnium

CAS-No. 7440-58-6

EC-No. 231-166-4

### SPECIFICATION

Zr + Hf total min. 98.0 %

Hf approx. 2 % (natural content)

H 0.8 +/- 0.2 %

Ti max. 0.3 %

Si max. 0.3 %

Mg max. 0.2 %

Ca total max. 0.2 %

Fe max. 0.08 %

Al max. 0.3 %

Cl max. 0.05 %

Ca soluble max. 0.03 %

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## METHOD OF ANALYSIS

Determination of oxidation value, particle size distribution, average particle size; specific surface area and combustion properties; gravimetric analysis of zirconium, verification of nitrogen content and accompanying impurities by special analytical methods. For specific information on Rockwood Lithium standard determination methods see our delivery program.

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## PHYSICAL PROPERTIES

Appearance	suspension
Color	black to gray
Melting point/ range	1,852 °C (Zirconium powder)
Boiling point/boiling range	3,577 °C
Density	6.5 g/cm <sup>3</sup> at 20 °C
Bulk density	1,200 - 2,300 kg/m <sup>3</sup>
Water solubility	(practically insoluble)
Grain Size	min. 99.9 % < 45 µm by sieving APS 5.5 +/- 1 µm acc. to Blaine
Additional Physical Properties	Ignition Point: 215 - 310 °C Combustion Rate: 460 +/- 75 sec/50 cm (Albemarle standard) Gain on Ignition: min. 32.3 % (weight increase by combustion)

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## HANDLING & STORAGE

Handling Highly flammable solid. Dust explosion hazard.

A mixture of zirconium metal and zirconium hydride powder of high purity and low oxide content. Due to its higher content in hydrogen less ignitable than other grades.

Keep away from flames, sparks and heat sources; use ground-connected metallic apparatus to avoid sudden ignition by electrostatic discharge; self-ignition is possible; vacuum-drying of suspensions not recommended; wear gloves, a face shield or goggles; in case of fire, cover only with sand, limestone or with a dry extinguishing powder suitable for metal fires class D;

**DO NOT USE WATER!**

Refer to our safety data sheet and special precautionary advice for specific safety information!

## TRANSPORT & PACKAGING

UN number 1358

ADR	Class: 4.1	PG: II	Label: 4.1
RID	Class: 4.1	PG: II	Label: 4.1
IMDG	Class: 4.1	PG: II	Label: 4.1
IATA_C	Class: 4.1	PG: II	Packing instruction (cargo aircraft): 448
IATA_P	Class: 4.1	PG: II	Packing instruction (passenger aircraft): 445

Hazard pictograms



Signal Word Danger

H&P Phrases See Safety Data Sheet

Labelling The labelling is according to EU-GHS classification ((EG) 1272/2008) and may vary in other countries. Please refer to the respective Safety Data Sheet for your country.

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## Packaging

In PE-bottles with max. 2.5 kg capacity, water content min. 30 %.

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## OTHER INFORMATION

Further Related Documents      Safety Data Sheet

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