TECHNICAL DATA SHEET

Date of Issue: 2026/05/05

Zirconium Metal powder, Grade GH, dry

CAS-No.	7440-67-7
EC-No.	231-176-9
REACH No.	01-2119490102-49-0004
Molecular formula	Zr
Product number	10001963, 10001964, 10001965

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.

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 %

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.

PHYSICAL PROPERTIES

Appearance	powder
Color	dark gray
Melting point/ range	1,855 °C (Information taken from reference works and the literature.)
Boiling point/boiling range	3,577 °C (Information taken from reference works and the literature.)
Density	6.434 g/cm3 at 20 °C Method: OECD Test Guideline 109
Water solubility	< 0.00005 g/l at 20 °C Method: OECD Test Guideline 29
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 (Albemarle standard): 460 +/- 75 sec/50 cm Gain on Ignition: min. 32.3 % (weight increase by combustion) Apparent density: approx. 1.9-2.4 g/ccm

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 2008

ADR	Class: 4.2	PG: I	Label: 4.2
RID	Class: 4.2	PG: I	Label: 4.2
IMDG	Class: 4.2	PG: I	Label: 4.2
IATA_C	Class: 4.2		
IATA_P	Class: 4.2		

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.

Packaging

In tin cans of max. 5 kg capacity.

OTHER INFORMATION

Further Related Documents	Safety Data Sheet