

TECHNICAL DATA SHEET

Date of Issue: 2016/09/02

Zirconium Nickel alloy 30/70 A

Molecular Formula ZrNi

Product Number 453460

APPLICATION

Zirconium/Nickel alloy powders find application in various pyrotechnic and ordnance areas. They are used in squibs, delay mixtures and initiators.

FURTHER INGREDIENTS

Nickel powder

CAS-No. 7440-02-0

EC-No. 231-111-4

Zirconium powder (non pyrophoric)

CAS-No. 7440-67-7

EC-No. 231-176-9

Hafnium

CAS-No. 7440-58-6

EC-No. 231-166-4

SPECIFICATION

Auto Ignition Temperature > 240 °C

Combustion Rate 575 +/- 200 sec/50 cm

Particle Size min. 99.9 % < 45 µm

Average Particle Size 5 +/- 2 µm

Zr + Hf content 30 +/- 3 %

Ni content 70 +/- 3 %

(Zr + Hf) + Ni content > 97 %

Fe max. 0.20 %

Ca max. 0.15 %

Al max. 0.15 %

S max. 0.01 %

Moisture max. 0.2 %

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Technical data sheets may change frequently. You can download the latest version from our website www.albemarle-lithium.com. Please contact us at www.albemarle-lithium.com/contact with questions.

METHOD OF ANALYSIS

Gravimetric determination of zirconium and nickel. Spectral analysis of accompanying impurities. Measurement of average particle size and combustion properties.

PHYSICAL PROPERTIES

Appearance	powder
Color	gray black
Melting point/ range	1,140 - 1,650 °C
Bulk density	2,000 - 3,000 kg/m ³
Water solubility	(practically insoluble)

HANDLING & STORAGE

Handling	Highly flammable solid. Dust explosion hazard. Powders of these alloys are highly flammable and burn with an intense heat. Keep away from flames, sparks and heat sources. Use ground connected metallic apparatus to avoid sudden ignition by electrostatic discharge. In case of fire cover with dry sand or dry chemical/dolomite (powdered limestone). Never extinguish with water, carbon dioxide, or halocarbon. See our material safety data sheet and special precautionary advice for more information on safety.
Storage	Store in tightly closed containers.

TRANSPORT & PACKAGING

UN number 3089

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

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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

Passenger aircraft: tin cans of 2.5 kg. Cargo aircraft only: tin cans of 5 kg. Other packaging sizes on request.

OTHER INFORMATION

Further Related Safety Data Sheet
Documents

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