

## TECHNICAL DATA SHEET

Date of Issue: 2023/01/18

# Titanium Metal powder, Grade E, wet

CAS-No.	7440-32-6
EC-No.	231-142-3
REACH No.	01-2119484878-14-0064
Molecular formula	Ti
Product number	10000413, 10000414

### APPLICATION

Titanium powders find application in various pyrotechnic areas. Mixed with oxidizing agents they are used in initiators including air bag inflators. They are also used in manufacture of flash cubes, for joining glass or ceramics to metals, and as a getter substance.

### SPECIFICATION

Auto Ignition Temperature	≥ 240°C
Combustion Rate	25 - 60 sec/50 cm
Particle Size	min. 99.9 % < 45 µm
Average Particle Size	3 ± 1 µm
Gain on Ignition	55.0 - 59.0 %
Ti total	93.0 - 95.4 %
Ti active	82.5 - 88.5 %
Ca	max. 1 %
N	max. 1 %
Si	max. 2.5 %

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Technical data sheets may change frequently. You can download the latest version from our website

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Mg	max. 0.05 %
Al	max. 1.5 %
Cl	max. 0.1 %

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## METHOD OF ANALYSIS

Determination of average particle size, particle size distribution, combustion properties and gain on ignition. Gravimetric analysis of titanium and determination of accompanying substances.

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## PHYSICAL PROPERTIES

Appearance	suspension
Color	dark gray
Melting point/range	1,668 °C at 1,013 hPa
Boiling point/boiling range	3,287 °C at 1,013 hPa
Density	ca. 1.4 g/cm <sup>3</sup> at 20 °C
Bulk density	1,000 - 2,000 kg/m <sup>3</sup>
Water solubility	(practically insoluble) (Note: Titanium metal powder, dry)
Molecular weight	47.87 g/mol

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## HANDLING & STORAGE

**Handling** Highly flammable solid. Dust explosion hazard. Fine Ti metal powder ignites reliably and burns away at high temperature within a short time. Ti metal powder is resistant to most chemical reagents but is attacked at elevated temperatures by acids and by oxidizing agents. Dilute aqueous HF attacks titanium vigorously. Keep away from flames, sparks and heat sources. Use ground connected metallic apparatus to prevent electrostatic charges causing self ignition. Vacuum drying of suspensions is not recommended. Wear gloves and protective goggles. In case of fire cover with dry sand or dry chemical/dolomite (powdered limestone). Never extinguish with water, carbon dioxide, or halocarbon. See our safety data sheet and special precautionary advice for more information on safety.

## TRANSPORT & PACKAGING

UN number 1352

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

As aqueous suspension in PE-bottles. Ti content 1.0 kg or 2.5 kg (water content min. 30 %). Other packing quantities on request.

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## OTHER INFORMATION

Further Related Documents      Safety Data Sheet

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