

TECHNICAL DATA SHEET

Date of Issue: 2021/07/22

Titanium Metal powder, Grade S (9.5 µm), dry

CAS-No.	7440-32-6
EC-No.	231-142-3
REACH No.	01-2119484878-14-0064
Molecular formula	Ti
Product number	10000418, 10000510, 10002009, 10002010, 10002011, 10002012, 10002013

APPLICATION

As getter material in vacuum technology. In the manufacture of Hg dispensers in mercury-vapor lamps. As a deoxidizing agent in powder metallurgy. For reactive solders and brazes. Titanium powders also find application in various pyrotechnic areas. Mixed with oxidizing agents they are used in initiators and air bag inflators. They are also used in the manufacture of flash cubes, for joining glass or ceramics to metals, and as a getter substance.

SPECIFICATION

Auto Ignition Temperature	> 400 °C
Combustion Rate	35 ± 10 sec/50 cm
Particle Size	min. 99.9 % < 45 µm
Average Particle Size	9.5 ± 1.5 µm
Apparent Density	approx. 1.4 g/ccm
Gain on Ignition	min. 64.5 %
Ti total	min. 98.7 %
Ti active	min. 96.7 %

The information presented herein is believed to be accurate and reliable, but is presented without guarantee or responsibility on the part of Albemarle Corporation and its subsidiaries and affiliates. It is the responsibility of the user to comply with all applicable laws and regulations and to provide for a safe workplace. The user should consider any health or safety hazards or information contained herein only as a guide, and should take those precautions which are necessary or prudent to instruct employees and to develop work practice procedures in order to promote a safe work environment. Further, nothing contained herein shall be taken as an inducement or recommendation to manufacture or use any of the herein materials or processes in violation of existing or future patent.

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.



N	max. 0.5 %
H	max. 0.1 %
Fe	max. 0.09 %
Cl	max. 0.06 %
Ni	max. 0.05 %
Si	max. 0.1 %
Mg	max. 0.04 %

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. For specific information on our standard methods of testing see the special metals sales program.

PHYSICAL PROPERTIES

Appearance	powder
Colour	dark grey to black
Melting point/range	1,668 °C
Boiling point/boiling range	3,287 °C at 1,013 hPa
Density	4.51 g/cm ³ at 20 °C
Bulk density	1,000 - 2,000 kg/m ³
Water solubility	(practically insoluble)
Molecular weight	47.87 g/mol

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HANDLING & STORAGE

Handling Highly flammable solid. Dust explosion hazard. A pure titanium powder with high Ti metal content. Ti metal powder is resistant to most chemical reagents but is attacked at elevated temperatures by acids and oxidizing agents. Dilute aqueous hydrofluoric acid 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. Titanium powder is a flammable solid and should be handled with caution. Mixing, blending, milling, and grinding of dry Ti powder should be done only under argon or helium. 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 2546

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	PG: I	
IATA_P	Class: 4.2	PG: I	

Hazard pictograms



Signal word **Danger**

H&P Phrases **See Safety Data Sheet**

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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

As dry powder Ti "S" is packed in polyethylene bags overpacked in tin cans. Standard unit size 2.5 kg and 5.0 kg quantities. Other packaging quantities on request.

OTHER INFORMATION

Further Related Documents **Safety Data Sheet**

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