



# Titanium metal powder

## Grade E, dry

**Article number** 454110

**CAS-No.** 7440-32-6

**Typical Properties**

Formula:	Ti
Form and Color:	powder, grey to black
Melting Point:	1668 ± 50 °C

**Applications** 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.

**Characteristics** **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.

**MIL-Specification** On request Ti metal powder is available to meet government specifications MIL-T-13405E.

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<b>Typical Analysis</b>	Auto Ignition Temperature	> 240 °C
	Combustion Rate	25 – 45 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 %
	Mg	max. 0.05 %
	Al	max. 1.5 %
Cl	max. 0.1 %	

**Recommended test methods** Determination of average particle size, particle size distribution, combustion properties and gain on ignition. Gravimetric or colorimetric analysis of titanium and determination of accompanying substances.

**Handling** 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 material safety data sheet and special precautionary advice for more information on safety.**

**Packaging** As dry powder in tin cans. Ti content 1.0 kg, 2.5 kg, or 5.0 kg. Other packaging quantities on request.

**Transport classification** GGVE, GGVS, RID, ADR: class 4.2, Code: S4  
IMDG-code: class 4.2 UN-No. 2546, PG. I  
ICAO: air transport prohibited