



Zirconium hydride Grade F

Article Number	453220
CAS-No.	7704-99-6
Formula	ZrH ₂
Applications	Mixed with oxidizing agents a constituent in compositions for flares, fuzes and combustion charges in pyrotechnics; as a binding or brazing component for grinding agents, carbides, ceramics and metal in abrasive wheels and polishing disks. Applicable as hydrogen source for the foaming of metals.
Characteristics	Highly flammable solid. Dust explosion hazard. A stable hydride powder which burns at red heat; less ignitable than a comparable zirconium powder.
Delivery Form	Greyish-black powder
Apparent Density	approx. 1 g/cm ³
Combustion Rate	Chemetall standard: 350 ± 60 sec/50 cm
Particle Size	min. 99.9 % < 45 µm by sieving APS 2.3 ± 0.5 µm acc. to Blaine
Gain on Ignition	29.5 ± 1 % (weight increase by combustion)

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Typical Analysis	Zr + Hf	total	95.5 ± 1	%
	Hf	approx.	2	% (natural content)
	H	min.	1.4	%
	Si	max.	0.6	%
	Mg	max.	0.3	%
	Ti	max.	0.15	%
	Al	max.	0.2	%
	Fe	max.	0.1	%
	Ca	max	0.1	%

**Recommended
Test Methods** Determination of oxidation value, particle size distribution and average particle size; gravimetric analysis of zirconium, determination of hydrogen content and impurities.

Handling Keep away from flames, sparks and heat sources; use earth-connected metallic apparatus to avoid sudden ignition by electrostatic discharge; 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 material safety data sheet and special precautionary advice for specific safety information!

Packaging Dry, in tin cans of max. 4 kg capacity.

**Transport
Classification** GGVE, GGVS, RID, ADR: class 4.1, fig. 14 b
IMDG-code: class 4.1 UN-No. 1437, PG. II
ICAO: class 4.1 UN-No. 1437, PG. II/Drill-Code 3L