

# Zirconium Metal powder, Grade A4



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| <b>PRODUCT</b>     | Zirconium Metal powder, Grade A4, in water / n-propyl Alcohol<br>SPZF Type                      Product No. 11011  |
| <b>APPEARANCE</b>  | CAS No. 7440-67-7                      EINECS-No. 231-176-9<br>Greyish-black powder  |
| <b>FORMULA</b>     | Zr   |
| <b>APPLICATION</b> | High energy igniters, Fuses and thermal batteries in pyrotechnics, production of highly reactive fuses, delay composition, and igniter composition in pyrotechnics for use in ammunition, explosive, airbags and belt pretentioners, getter materials zirconium component in powder metallurgy, as a source material of getter film for manufacturing transmitter. |

## SPECIFICATION

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|---|---------------------|
| Zr <sub>total</sub> + Hf <sub>total</sub> | 97.4 +/- 0.8%       |
| Hf  | approx. 2%          |
| Ignition gain                             | 31.5 +/- 1.0%       |
| Burning rate                              | 13.0 +/- 5.0 s/50cm |
| Auto Ignition temperature                 | 180 +/- 20 °C       |
| Fe  | max. 0.1%           |
| Al  | max. 0.1%           |
| Ca  | max. 0.05%          |
| H   | max. 0.2%           |
| Particle size (by sieving)                | min. 99.9 % < 45µm  |
| Average particle size (Blaine)            | 2.0 ± 0.3µm         |
| Average particle size (Malvern)           | 3.8 ± 0.3µm         |