



## What is hafnium carbide?

Hafnium carbide, chemical formula is HfC, the relative atomic weight is 190.5, theoretical carbon content is 6.30%, with high chemical stability and good high temperature properties. Density is 12.7g / cm<sup>3</sup>, melting point is 3890 °C, belonging to the highest bidder single compound melting point as we known. Volume resistivity is  $1.95 \times 10^{-4} \Omega \cdot \text{cm}$  (2900 °C), the thermal expansion coefficient is  $6.73 \times 10^{-6} / ^\circ\text{C}$ . Usually we use hafnium oxide (HfO<sub>2</sub>) and carbon to make composite powder, the reaction temperature is 1900 ~ 2300 °C, hafnium carbide with some metal carbides form a solid solution, such as : hafnium carbide ZrC, tantalum carbide TaC, etc. . It has a high melting point and high elastic modulus, good electric conductivity, low thermal expansion and good impact properties. Because hafnium carbide has HfC hardness and high melting point, it can be used for hard alloy additives. 4TaC • HfC melting point is about 4215 °C, it was the highest melting point compound as we known. HfC frontier protective layer of hafnium carbide alloy can be used for rocket nozzles and re-entry gliding aircraft, 4TaC • HfC alloy tool steel can manufacture resistance material.

English name: Hafnium carbide

English alias: Hafnium carbide (HfC); [1] Hafnium carbide; Hafnium - methane (1:1)

CAS: 12069-85-1

EINECS:235-114-1

Formula: HfC

Molecular weight: 194.5325

Changsha Langfeng Metallic Material Ltd. is specialized in production of hafnium carbide powder, and an integral forming of production, development, sales, services and related solutions, if you want to know more information about hafnium carbide, please pay attention to our official website products link:

<http://www.langfengmetallic.com/powder/hafnium-carbide-powder.html>