Hafnium carbide powder is a kind of a black odorless powder. Density : 12.7g/cm³, melting point: 3890°C...etc. CAS No. 12069-85-1, UN No. 3178. HfC powder has the properties of high toughness, high melting point, high strength and corrosion resistance, high-temperature resistance. Carbide hafnium powder has a highly efficient absorption of visible light, infrared reflector, heat storage and other characteristics. Widely used in electronics, coatings, spraying, carbide, aerospace, atomic energy, rigid film and metallurgical automation and other high-tech areas of key materials. Especially for rocket nozzles, can be used to re-enter the atmosphere of space rocket nose cone parts.

Hafnium carbide with zirconium carbide, tantalum carbide and other carbide could be made into multiple solid solution. 4TaC • HfC has a melting point of 4215 °C, the highest melting point compound as known. Hafnium carbide’s high hardness and melting point, can be used as additives in cemented carbide products.
Advantage: Why Langfeng Material's carbide powder is better:

1: use high purity raw material: hafnium oxide, carbon black powder. Strictly control in raw material ensure the high purity of end product: hafnium carbide solid solution powder;
2: unique additive application ensure powder grain densification, fairly well carburizing sintering, well-distributed grain;
3: unique sintering process ensure single phase solid solution, low oxygen and low free carbon content, which bring high and stable quality;

Widely used in electronics, coatings, spraying, carbide, aerospace, atomic energy, rigid film and metallurgical automation and other high-tech areas of key materials. Especially for rocket nozzles, can be used to re-enter the atmosphere of space rocket nose cone parts.

With high hardness, corrosion resistance, good thermal stability, worked as a deoxidizer in the steel industry;
Used in hard alloy products (cutting tools);
Applied to high temperature thermal spraying materials.
## The quality index of typical products

<table>
<thead>
<tr>
<th>Grade</th>
<th>Total Carbon</th>
<th>Free Carbon</th>
<th>Other Element (max,%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nb</td>
</tr>
<tr>
<td>LF-HfC</td>
<td>≥6.15</td>
<td>≤0.30</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Grain range: 0.5-500 micrometer, 5-400mesh; Grain size and composition could be customized.

### Changsha Langfeng metallic material CO., Ltd brief introduction

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Changsha Langfeng Metallic Material Co., Ltd

Changsha Langfeng metallic material CO., Ltd uphold the mission of the world benefit, is committed to doing the field of science and technology advances in new materials, builders, build the world’s material industry aircraft carrier!

Our company specializes in R & D, production and sales of new materials for aviation and aerospace, new materials for military rocket systems, spraying materials, functional materials, special ceramic materials, cemented carbide, metal ceramic materials and cutting tools.

The company has 16,000 square meters of standard factory, covering 50 acres, 180 employees. There are a full range of testing equipment and strong technical force; we have a 50-person R & D team, including 2 academicians, 10 Professors, 20 Ph.D. The company has been recognized by the state enterprise technology centers, national laboratory accreditation, the drafting of national standards units, access to a number of invention patents and Gold Award, maintaining long-term technical cooperation with the Chinese Academy of Sciences, Central South University and Changsha Institute of Mining and Metallurgy.

Products are widely used in metallurgy, construction, electronics, machinery, petroleum, textile, aerospace, cemented carbide and metal ceramics, and other high-tech fields. Product sales have covered more than 50 countries and regions in the world, a total of more than 600 customers, by the broad masses of the user’s consistent high praise.

Company culture
Company vision: Promoter in the field of new materials science and technology, become the carrier of new materials industry.
Company mission: Benefiting the world
Enterprise business philosophy: integrity, quality, innovation, win-win
Enterprise service concept: respect for customers, quick response, constant improvement and the pursuit of the better
Enterprise spirit: teamwork, courage to open up, never abandon, create brilliant
Enterprise values: for the excellent quality of the legislation of the enterprise, to get the heart of the people with quality service
Enterprise responsibility: to create value for customers, for employees to build a successful life stage.
Business Pursuit: In the next five years, our overall plan is through an additional investment of USD 80 million. By 2023, we will become a world-class production and R&D base for new materials, sales revenue will up to 10 billion US dollars.