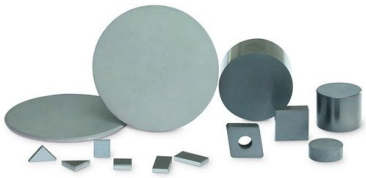

# 5um 10um PCD Cutting Tool Blanks Pcbn Blanks For Aerospace Industry

Our Product Introduction

## Basic Information

- Place of Origin: China
- Model Number: Round Disc
- Minimum Order Quantity: 1 PCS
- Packaging Details: Plastic box, Carton
- Delivery Time: 5-8 workdays
- Payment Terms: T/T, Western Union, L/C
- Supply Ability: 1500 pieces per month



## Product Specification

- PCD Cutting Tool Blanks: Aerospace Industry PCD
- Shape: Round
- Size: 58mm
- Grain Size: 5μm, 10μm, 25μm
- Application: Cutting
- Transport: By Air
- Highlight: **round 58mm PCD Cutting Tool Blanks**, **5um 10um PCD Cutting Tool Blanks**, **pcbn blanks for Aerospace Industry**

Our Product Introduction

for more products please visit us on mwpcdtools.com

## Product Description

**Aerospace Industry PCD, PCD Blanks, PCD Discs, PCD Cutting Tool Blanks**

**1. Description:**

At present, the widely used composite materials in the aerospace field mainly include carbon fiber reinforced materials (CFRP, Carbon Fiber Reinforced Polymer), glass fiber reinforced materials (GFRP), aluminum-based silicon carbide (SiCp/Al) and other composite materials. Titanium alloy has the characteristics of low density, high strength, good corrosion resistance, excellent heat resistance and low temperature resistance, and non-magnetic. It is also widely used in aerospace.

Composite materials have the characteristics of light weight, high strength, high temperature resistance, corrosion resistance, etc., and are ideal materials in the aerospace field. With the widespread application of aerospace composite materials, the correct selection and rational use of tools for high-efficiency and high-quality cutting has become the key.

The commonly used tool materials in the aerospace manufacturing industry mainly include cemented carbide, superhard tool materials and ceramics. Among them, cemented carbide and superhard tool materials account for the largest proportion, and have become the leading tools in the development of aerospace industry tools. It has a wide range of applications.

**2. Specification:**

We provide PCD blanks for aerospace industry in disc and cut-segment shapes for the precision tooling. There are 2μm, 5μm, 10μm, 25μm, and mixed grain sizes available.

| Grain Size | Type | Property | Application |
|---|---|---|---|
| Fine<br>5 μm | Round disc<br>Cutting tips | Good surface finishing | Used for copper, bronze, aluminum, plastic, wood composites; |
| Medium<br>10 μm | Round disc<br>Cutting tips | General purpose, a good balance of toughness and wear resistance | Used for low-medium silicon aluminum alloys, copper alloys, wood composites, etc. |
| Coarse<br>25 μm | Round disc<br>Cutting tips | Good wear resistance | Used for high silicon aluminum alloys, metal matrix composites, laminate flooring, carbide alloy, ceramics, etc. |

**3. Application:**

The tool with PCD blanks for aerospace industry has a sharp cutting edge that is finely ground, which effectively solves the defects of material delamination, tearing, burrs and other defects in the process of composite material processing. While obtaining precise and smooth cutting results, it makes the processing more efficient and wear-resistant. Better performance and longer tool life. In the processing of aerospace composite materials, hole processing, rims, and collar grooves are processing difficulties.

**4. Advantage:**

Extremely high hardness and wear resistance: the hardness can reach 8000HV, which is 80-120 times that of cemented carbide.
Excellent thermal conductivity: the thermal conductivity is 700W/mk, which is 1.5-9 times that of cemented carbide.
Low friction coefficient: The friction coefficient is generally 0.1-0. 3 (hard alloy is 0.4-1), so the PCD blanks for aerospace industry can significantly reduce the cutting force.
Low coefficient of thermal expansion: The coefficient of thermal expansion is only 0.9-10-6-1. 18x10-6, which is only 1/5 of that of cemented carbide. Therefore, the thermal deformation of tool with PCD blanks for aerospace industry is small and the machining accuracy is high.
Smaller material affinity: The affinity between tool with PCD blanks for aerospace industry and non-ferrous metals and non-metallic materials is very small. During the machining process, the chips are not easy to stick to the tool, and it is not easy to stick to the tool tip to form a built-up edge.

ME & WE

18837137981 zyxelina@sina.com mwpcdtools.com