



AEROSPACE MATERIAL

Society of Automotive Engineers, Inc.

TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 10001

SPECIFICATION

AMS 7880

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Revised

TUNGSTEN CARBIDE - COBALT POWDER Sintered and Crushed

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for producing plasma spray coatings to provide wear and fretting resistant surfaces.
3. **COMPOSITION:**

	min	max
Free Carbon (1)	--	0.10
Total Carbon	5.15	--
Cobalt	11.00 - 13.00	--
Tungsten	81.00	--
Iron	--	1.50
Other Impurities, each (1)	--	1.00

(1) Determination not required for routine acceptance.

4. **TECHNICAL REQUIREMENTS:** When ASTM methods are specified for determining conformance to the following requirements, tests shall be conducted in accordance with the issue of the ASTM method listed in the latest issue of AMS 2350.
 - 4.1 **Particle Size Distribution:** Powder shall be supplied with the following particle size distribution. Sieve analysis shall be conducted in accordance with ASTM B214.

Mesh Size *	% By Weight	
	min	max
-200	99.5	--
-325	95.0	--

* - indicates passing through sieve

- 4.2 **Plasma Spraying:** Powder shall be capable of producing acceptable plasma spray coatings to standards as agreed upon by purchaser and vendor.
- 4.3 **Metallographic Inspection:** Tungsten carbide particles in the cobalt matrix shall not exceed 20 microns and shall be predominantly 2 to 5 microns.
5. **QUALITY:** Material shall be thoroughly blended, uniform in color and quality, dry, and free from foreign materials and from imperfections detrimental to its spraying qualities.

6. **REPORTS:**

- 6.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report stating that the product conforms to the requirements specified. This report shall include the purchase order number, material specification number, and quantity.

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