



DESCRIPTION

Kennametal manufactures high-quality refractory tungsten powders using automated reduction of tungsten oxide.

APPLICATIONS

We manufacture tungsten powder for use in electrical contacts, particle guns, catalysts, and raw material for tungsten mill products and wire. Coarse tungsten powder is used in thermal spray applications and applications that require non-thermal powder consolidation technologies. Tungsten powders are widely used in lead-free ammunition and moldable radiation shielding products. Tungsten powders are also used as pour-in, high density filling material for irregularly shaped cavities, weights and radiation attenuation material. Special powder processing services are available to produce tungsten powder with a narrow particle size distribution, increased apparent density, and/or high flow.

TYPICAL PHYSICAL PROPERTIES

| Type | FSSS As supplied | FSSS Lab Milled | Scott Density g/in ³ | Mesh Analysis | |
|------|---------------------|--------------------|------------------------------------|---------------|----------------|
| | | | | Mesh | Weight % |
| C-3 | 0.70 – 0.99 | Reported | 20 – 40 | >200 <200 | 2% 98% min. |
| C-5 | 1.00 – 1.39 | Reported | 25 – 50 | | |
| C-6 | 1.40 – 1.99 | Reported | 30 – 60 | | |
| C-8 | 2.00 – 3.99 | Reported | 35 – 75 | | |
| C-10 | 4.00 – 5.99 | Reported | 40 – 95 | | |
| C-20 | 6.00 – 7.99 | Reported | 40 – 95 | | |
| C-40 | 8.00 – 9.99 | Reported | 50 – 100 | | |
| C-60 | 10.00 – 50.0 | Reported | 60 – 110 | | |

Tap density analysis available on request

Particle size distribution by Malvern is available on request

TYPICAL TRACE ELEMENT CHEMICAL ANALYSIS

| Typical Element (Weight %) | | | | | | | | | | | |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|---------|----------------|----------------|------|
| Type | AL | Co | Cr | Cu | Fe | Mo | Ni | K | O ₂ | C _T | W |
| C-3 | ≤0.002 | ≤0.003 | ≤0.003 | ≤0.002 | ≤0.005 | ≤0.005 | ≤0.003 | ≤0.0015 | ≤0.30 | ≤0.015 | 99.9 |
| C-5 | ≤0.003 | ≤0.002 | ≤0.003 | ≤0.002 | ≤0.010 | ≤0.010 | ≤0.005 | ≤0.002 | ≤0.08 | ≤0.006 | |
| C-6 | ≤0.002 | ≤0.002 | ≤0.002 | ≤0.002 | ≤0.005 | ≤0.010 | ≤0.003 | ≤0.002 | ≤0.06 | ≤0.002 | |
| C-8 | ≤0.002 | ≤0.002 | ≤0.003 | ≤0.003 | ≤0.005 | ≤0.010 | ≤0.005 | ≤0.002 | ≤0.06 | ≤0.002 | |
| C-10 | ≤0.002 | ≤0.002 | ≤0.003 | ≤0.002 | ≤0.01 | ≤0.010 | ≤0.005 | ≤0.002 | ≤0.06 | ≤0.003 | |
| C-20 | ≤0.002 | ≤0.002 | ≤0.005 | ≤0.002 | ≤0.010 | ≤0.010 | ≤0.005 | ≤0.002 | ≤0.05 | ≤0.002 | |
| C-40 | ≤0.002 | ≤0.005 | ≤0.005 | ≤0.002 | ≤0.020 | ≤0.010 | ≤0.005 | ≤0.002 | ≤0.05 | ≤0.002 | |
| C-60 | ≤0.003 | ≤0.02 | ≤0.005 | ≤0.003 | ≤0.050 | ≤0.010 | ≤0.010 | ≤0.002 | ≤0.05 | ≤0.003 | 99.8 |

All powder is commercially uniform in purity. The chemical and physical analyses are determined for each production lot of powder by using commercially accepted methods. The results of all relevant tests are reported to the customer on a Certificate of Analysis.

PACKAGING

All material is packed in polyethylene bags inside the following containers:
 3.5 Gallon Pail (up to 50kg per container)
 17 Gallon Metal Drum (up to 250kg per container)

CUSTOMER SERVICE CONTACT

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