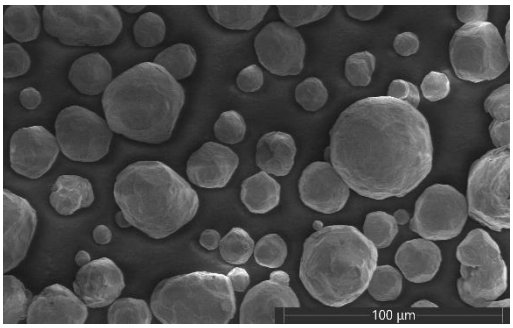
Pure Copper HVOF 20-45 µm

1. Introduction

Pure Copper HVOF 20-45 µm is a high-quality copper powder with spherical particles with no satellite content. Dedicated for HVOF (High Velocity Oxygen Fuel). It ensures consistent flowability and layer quality. Designed specifically for thermal applications, electrical and thermal conductivity coatings, mold and tooling applications as well as tribological surfaces.



1.1 Basic facts

Chemistry	**Cu 99.80%**
Form	Powder
Shape / Morphology	Spherical / Spheroidal
Size	20-45 µm
Apparent density	min. 4.6 g/cm^3
Purpose	Thermal conductivity coatings, tribological surfaces
Process	HVOF

1.2 Typical Applications

- Electrical and thermal conductivity coatings
- Restoration and repair of copper or copper-alloy parts
- Corrosion protection coatings
- Bond coats / interlayers
- Mold and tooling applications
- Tribological / sliding surfaces
- EMI/RFI shielding

2 Material Information

2.1 Chemical composition

Element	Value	wt.%
Cu	min.	99.80
O	max.	0.12
Others	max.	0.08

2.2 Additional Material Characteristics

Product	Nominal range	Apparent density (g/cm³)	Morphology
Pure Copper HVOF 20-45µm	20-45 µm	Min. 4.6	Spherical / Spheroidal

2.3 Recommended processes

- HVOF (High Velocity Oxygen Fuel)

3 Physical Properties of Parts

3.1 Mechanical Properties

Product	Max Service Temperature °C		Recommended Finishing Method
	°C	F	
Pure Copper HVOF 20-45µm	750	1380	High speed steel or carbide tools

4 Commercial Information

4.1 Ordering Information and Availability

Product	Package Size	Package Type	Availability	Distribution
Pure Copper HVOF 20-45µm	2kg	Plastic Jar UNX	Stock	Europe
	4kg	Plastic Jar UNX	Stock	Europe
	10kg	Wide-neck drum UNX	Stock	Europe

4.2 Storage and Handling Guidelines:

- Always store the product in its original container in a dry environment.
- Gently rotate the container before use to ensure even distribution. Avoid aggressive handling to prevent damage to fragile, mechanically clad components.
- Once opened, powder containers should be kept in a drying oven to prevent moisture absorption.
- If a desiccant is present, be sure to remove it prior to using the product.

4.3 Safety Recommendations

Refer to the Safety Data Sheet (SDS). SDS document can be accessed on the Ultra Metal Powders website at www.umpowders.com under Resources → Safety Data Sheets.