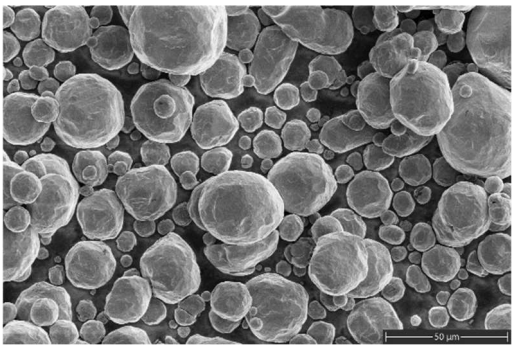
Pure Copper T-Spray

1. Introduction

Pure Copper T-Spray is a high-purity, chemically homogeneous powder designed for reliable performance in thermal spray applications. Its spheroidal particle shape ensures smooth and consistent feeding. This material is ideal for coating copper-alloy components, improving electrical conductivity, and providing effective EMI/RFI shielding.



1.1 Basic facts

Chemistry	**Cu 99.85%**
Form	Powder
Shape / Morphology	Spheroidal
Size	38-90 µm
Apparent density	min. 4.8 g/cm^3
Purpose	Corrosion protection, restoration, electrical and thermal conductivity
Process	Atmospheric Plasma Spray - APS Flame Spray - FPS

1.2 Typical Applications

- Repair of worn non-ferrous parts
- Thermal management and electrically conductive coatings
- Components exposed to corrosive inks in the paper and printing industry
- Self-lubricating bearing surfaces
- Friction parts like alternator brushes
- Effective EMI/RFI shielding solutions
- Electrical contacts and grounding terminals

2 Material Information

2.1 Chemical composition

Element	Value	wt.%
Cu	min.	99.80
Others	max.	0.20

2.2 Additional Material Characteristics

Product	Nominal range	Apparent density (g/cm^3)	Morphology
Pure Copper T-Spray	38-90 µm	Min. 4.8	Spheroidal

2.3 Recommended processes

- Atmospheric Plasma Spray
- Flame Spray

3 Coating Information

3.1 Key Thermal Spray Coating Information

Product	Max Service Temperature °C		Recommended Finishing Method
	°C	F	
Pure Copper T-Spray	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 T-Spray	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.