ULTRAFINE
Producing Unique Fine Gas Atomized Powders Since 1987

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CERTIFIED TO AS9100 & ISO 9001

ULTRA FINE METAL POWDER FOR ADDITIVE MANUFACTURING

Ultra Fine Specialty Products produces metal powders that are optimized to improve the quality and speed of printing, particularly for binder jet technology (BJT) and laser beam powder bed fusion (PBF-LB). These products work because of Ultra Fine's unique gas-atomization technology, ability to make blends from optimal cuts of powder, and additional post-atomization processes to optimize density and flowability.

Typical Particle Size Distributions for Additive Manufacturing

Process technology	Size (µm)
Binder Jet Technology (BJT)	≤ 16, ≤ 22, ≤ 31, ≤ 38, ≤ 45
Laser Beam Powder Bed Fusion (PBF-LB)	15 to 53, 15 to 45, 10 to 45
Cold Spray Additive Manufacturing (CSAM)	20 to 45, 15 to 38, 10 to 32, 5 to 25
Electron Beam Powder Bed Fusion (EB-PBF)	45 to 106
Direct Energy Deposition (DED)	53 to 150

Ultra Fine Particle Size Distributions for Additive Manufacturing

Grade	UF-1	UF-2	UF-3	UF-4	UF-5	UF-6
PSD						
D10, µm	5	9	8	4	17	26
D50, µm	14	15	19	27	30	39
D90, µm	31	25	40	53	50	60
Apparent density, g/cm^3	4.1	4.1	4.2	4.6	4.4	4.4
Tap density, g/cm^3	5.0	4.8	5.2	5.6	5.4	5.4

Ultra Fine Alloys for Additive Manufacturing

- Stainless Steels: 300 series, 400 series, 17-4PH
- Tool Steels: M2, M4, D2
- Magnetic Alloys: FeNi, FeCo, Sendust
- Copper-based Alloys: Cu, C18000, C18150, C18200
- Master Alloys: 17-4MA, 4340 MA, 316L
- Low Alloy Steels: 4340, 4140
- Super Alloys: 718, 625
- Cobalt-based Alloys: F-75, H25

*This is only a partial list of available alloys