

13  
**Al**  
ALUMINIUM

22  
**Ti**  
TITANIUM

26  
**Fe**  
IRON

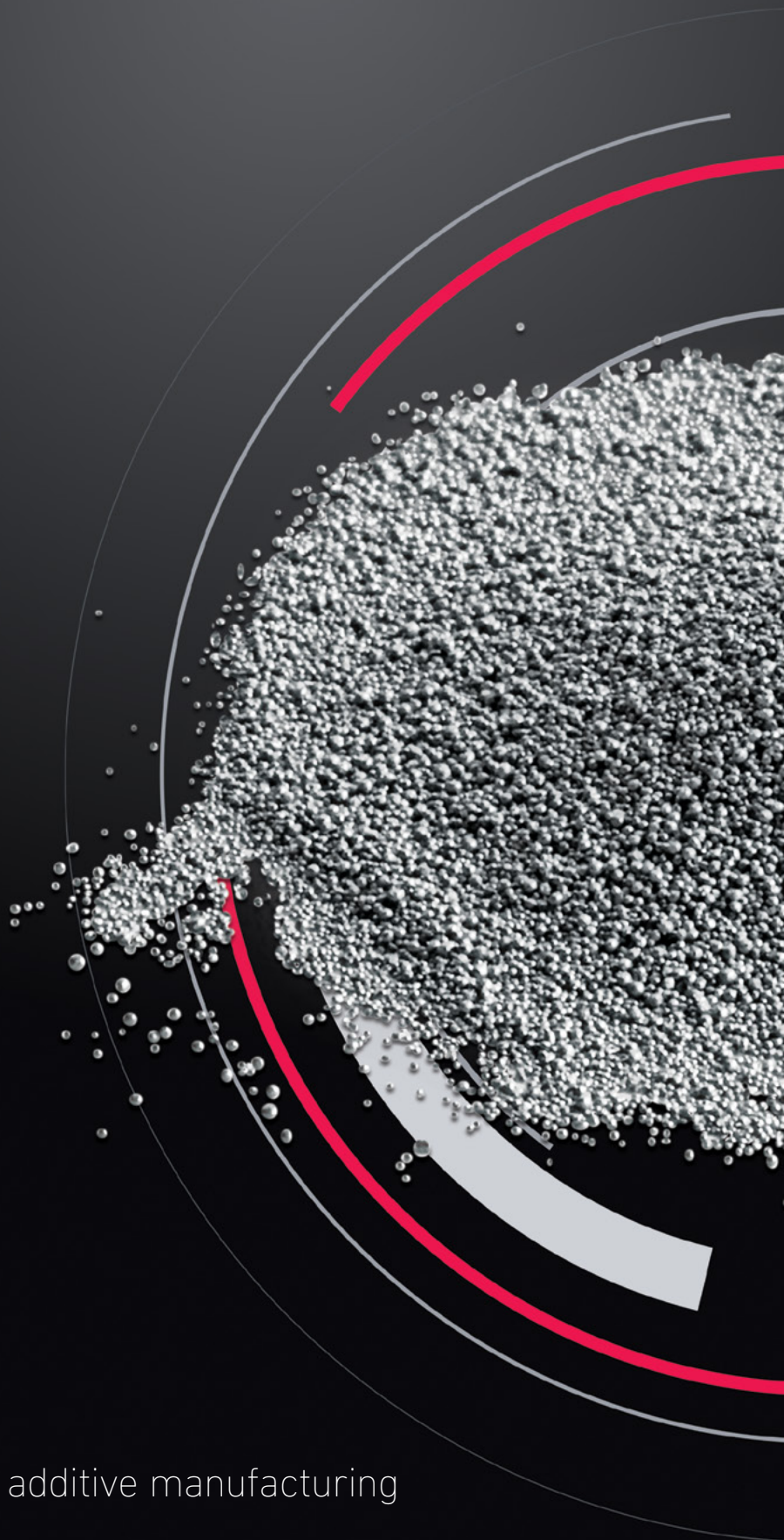
27  
**Co**  
COBALT

28  
**Ni**  
NICKEL

POWDERRANGE

# ON-DEMAND METAL POWDER

Premium powders optimized for additive manufacturing



FIRST-CLASS R&D

materials science specialists, equipment and infrastructure

NEW ALLOYS

for innovation, fabrication, and testing

THE MOST INDUSTRY-LEADING METALLURGISTS

and thousands more material and industry experts on staff

WORLD'S LARGEST PRODUCER

of gas atomized powder for AM

130+ YEARS

alloy and production expertise



A powder for every AM application

Carpenter Additive manufactures premium-quality powders optimized specifically for metal additive manufacturing (AM). With more than 130 years of metallurgical expertise in the most critical applications, customers can leverage the depth of knowledge at Carpenter Additive to 3D print with confidence. Whether direct energy deposition (DED), laser powder bed fusion (L-PBF), or electron beam powder bed fusion (EB-PBF), our powders are optimized to the specific process technology and machine OEM, quality checked by our material testing labs, and shipped with both paper and digital certificates of conformance.

Production moves fast.  
So does Carpenter Additive.

25+ PREMIUM  
metal powders in stock

24 HOUR  
order ship time





## Instantly available premium powders for standard specs

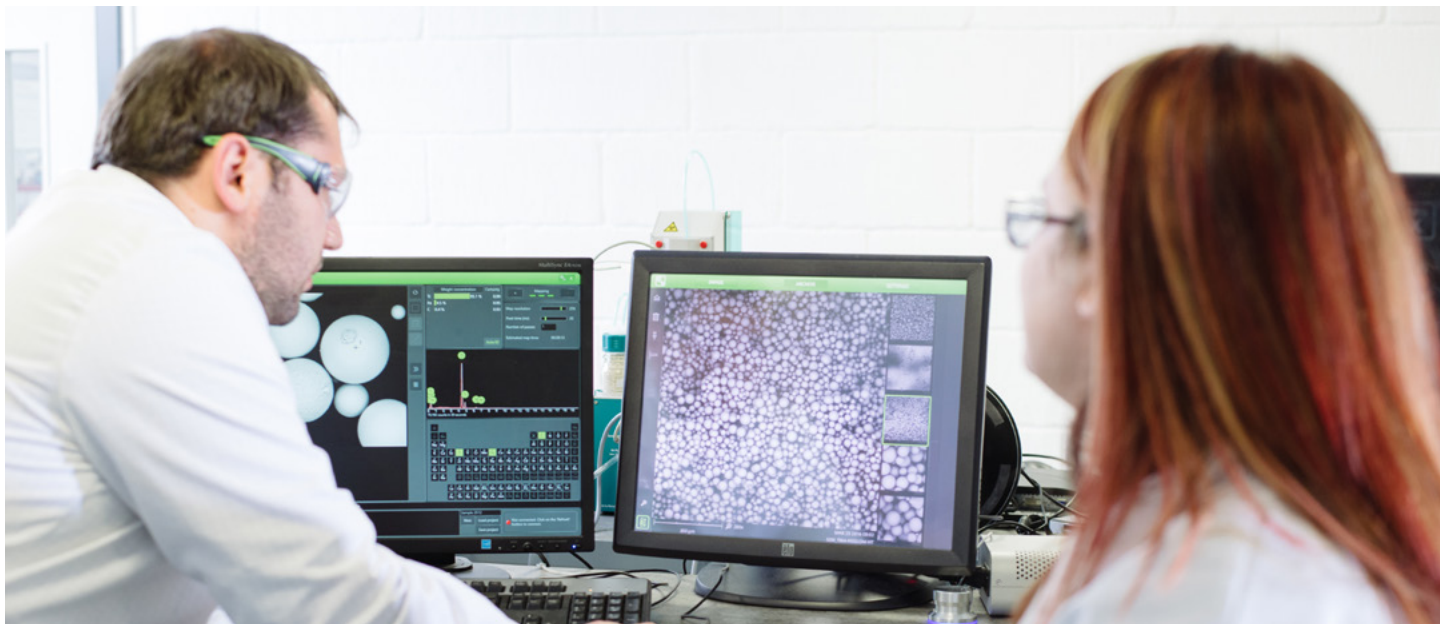
Carpenter Additive takes pride in being the world's largest producer of high-quality, gas atomized powder for AM, as well as a trusted supplier of alloys developed to meet the speed and quality standards of busy AM facilities. PowderRange production is optimized for short lead times, with an extensive selection of off-the-shelf, standard specification powders in stock. Our advanced specialty metal manufacturing facilities offer premium melting capacity, atomization, advanced testing, and inspection techniques. Carpenter Additive's team of metallurgical experts guide users through the powder purchasing process to ensure the appropriate grade of material is matched to every application.

- Comprehensive range of ready-to-order powder optimized to a variety of grades and designed to meet the specific needs of your AM machine
- Standard specification powder shipped within 24 hours of order for rapid delivery
- Delivered in safe, secure packaging in quantities up to 10kg
- Simple recurring order processes to help manage powder inventory

## Custom powders for novel applications

Standard metal powders can't meet every AM production need. We lead the industry in custom alloy development, with metal atomizers in facilities around the world. From improving flowability in flow-critical machine platforms to controlling interstitials for enhanced mechanical properties, Carpenter Additive originates new powder chemistries to deliver specific properties—to spec and on budget. We also have the infrastructure and expertise to enable material property optimization while providing long-term supply agreements for supply chain security.

- Develop new powder chemistries to deliver specific properties with custom development and atomization, additive processing, and quality testing
- Explore novel alloys and investigate compositions for new applications
- Customize solutions based on customer requirements and delivery needs



## Our commitment to quality

Carpenter Additive is committed to adding quality to the AM process by supplying well-defined powders and services to support the needs of our customers. We harness over a century of experience working with mission-critical applications to ensure we deliver what our customers ask for with the documentation required for validation.

- Certified AS9120, AS9100, ISO9001, and pending ISO13485
- Involved in all industry standard specification development, including ASTM and AMS-SAE, incorporating best-practice procedures for powder manufacturing, handling, and part quality
- Every powder is tested and supplied with a certificate of conformance
- Facilities and expertise to help you scale with growing demand—without compromising quality

Broad portfolio of proven, high-performance powders

Industry leader in additive manufacturing

**PREMIUM POWDERS, PROVEN RESULTS**



PowderRange in-stock powders

STANDARD POWDERS AVAILABLE ON-DEMAND							
ALLOY GROUP	POWDERRange ALLOY	PARTICLE SIZE DISTRIBUTION	SPECIFICATIONS	MATERIAL CLASSIFICATION	UNS	SIMILAR PRODUCTS	NOMINAL CHEMISTRY
Fe	CT PowderRange 155	F	ASTM A564	Stainless Steel	S15500	1.4540, 15-5PH	Iron Balance, Chromium 14.00-15.50%, Nickel 3.50-5.50%, Copper 2.50-4.50% , Manganese (Maximum) 1.00%, Silicon (Max) 1.00%, Carbon (Max) 0.07%, Phosphorus (Max) 0.040%, Sulfur (Max) 0.030%
	CT PowderRange 174	F	ASTM A564, AMS7012	Stainless Steel	S17400	1.4542, 17-4PH, EOS GP1, CL 92PH	Iron Balance, Chromium 14.00-15.50%, Nickel 3.50-5.50%, Copper 2.50-4.50%, Manganese (Max) 1.00%, Silicon (Max) 1.00%, Carbon (Max) 0.07%, Phosphorus (Max) 0.040%, Sulfur (Max) 0.030%
	CT PowderRange 174 Ar	F	ASTM A564, AMS7012	Stainless Steel	S17400	1.4542, 17-4PH, EOS GP1, CL 92PH	Iron Balance, Chromium 14.00-15.50%, Nickel 3.50-5.50%, Copper 2.50-4.50% , Manganese (Max) 1.00%, Silicon (Max) 1.00%, Carbon (Max) 0.07%, Phosphorus (Maximum) 0.040%, Sulfur (Max) 0.030%
	CT PowderRange 304	F, E	ASTM A276	Stainless Steel	S30403		Iron Balance, Chromium 18.0-20.0%, Nickel 8.0-12.0%, Manganese (Max) 2.00%, Silicon (Max) 1.00%, Phosphorus (Max) 0.045%, Carbon (Max) 0.030%, Sulfur (Max) 0.030%
	CT PowderRange 316L	F, E	ASTM F3184	Stainless Steel	S31603	1.4404, 316L, SS 316L-0407, CL 20ES	Iron Balance, Chromium 16.0 to 18.0%, Nickel 10.00 to 14.00%, Molybdenum 2.00 to 3.00%, Manganese (Max) 2.00%, Silicon (Max) 1.00%, Phosphorus (Max) 0.045%, Carbon (Max) 0.03%, Sulfur (Max) 0.030%
	CT PowderRange H13	F	ASTM A681	Tool Steel	T20813		Iron Balance, Chromium 4.75-5.5%, Molybdenum 1.1-1.75%, Silicon 0.8-1.25%, Vanadium 0.8-1.2%, Carbon 0.32-0.45%, Phosphorus (Max) 0.03%, Sulfur (Max) 0.03%, Manganese 0.2-0.6%
	CT PowderRange M300	F, E	DIN 1.2709	Maraging Steel	K93120	CL 50WS	Iron Balance, Nickel 17.0 to 19.0%, Cobalt 8.5 to 10.0%, Molybdenum 4.50 to 5.20%, Titanium 0.8 to 1.2%, Carbon (Max) 0.03%, Chromium (Max) 0.025%, Manganese (Max) 0.15%, Silicon (Max) 0.10%, Phosphorus (Max) 0.010%, Sulfur (Max) 0.010%
	CT PowderRange M300 LT	F	ASTM A579	Maraging Steel	K93120	EOS MS1	Iron Balance, Nickel 18.0-19.0%, Cobalt 8.5-9.5%, Molybdenum 4.6-5.2%, Aluminum 0.05-0.15%, Titanium 0.5-0.8%, Silicon (Max) 0.10%, Manganese (Max) 0.10%, Carbon (Max) 0.03%, Phosphorus (Max) 0.01%, Sulfur (Max) 0.01%
Ni/Co	CT PowderRange 625	F, E	ASTM F3056, AMS7001	Ni-based Superalloy	N06625	Nickel Alloy 625, IN625-0402, CL 101NB	Nickel Balance, Chromium 20.00 to 23.00%, Molybdenum 8.00 to 10.00%, Iron (Max) 5.00%, Niobium 3.15 to 4.15%, Cobalt (Max) 1.00%, Manganese (Max) 0.50%, Silicon (Max) 0.50%, Titanium (Max) 0.40%, Aluminum (Max) 0.40%, Phosphorus (Max) 0.015%, Sulfur (Max) 0.015%, Carbon (Max) 0.10%
	CT PowderRange 718	F, E	ASTM F3055	Ni-Fe Superalloy	N07718	Nickel Alloy 718, IN718-0405, CL 100NB	Nickel 50.0 to 55.0%, Chromium 17.0 to 21.0%, Iron Balance, Molybdenum 2.80 to 3.30%, Niobium + Tantalum 4.75 to 5.50%, Cobalt (Max) 1.0%, Titanium 0.65 to 1.15%, Manganese (Max) 0.35%, Silicon (Max) 0.35%, Copper (Max) 0.3%, Aluminum 0.20 to 0.8%, Carbon (Max) 0.08%, Nitrogen (Max) 0.03%, Oxygen (Max) 0.03%, Phosphorus (Max) 0.015%, Sulfur (Max) 0.015%, Boron (Max) 0.006%
	CT PowderRange CCM	F	ASTM F75	Co-based Superalloy	R31537	COCR, EOS MP1, CoCr-0404	Cobalt (Max) Balance, Chromium 27.00 to 30.00%, Molybdenum 5.00 to 7.00%, Manganese (Max) 1.00%, Silicon (Max) 1.00%, Iron (Max) 0.75%, Nickel (Max) 0.50%, Nitrogen (Max) 0.25%, Tungsten (Max) 0.20%, Carbon (Max) 0.1 to 0.2%, Aluminum (Max) 0.10%, Phosphorus (Max) 0.020%, Boron (Max) 0.010%, Sulfur (Max) 0.010%, Titanium (Max) 0.10
	CT PowderRange CCM MC	F, E	ASTM F75	Co-based Superalloy	R31537	COCR	Cobalt Balance, Chromium 27.00 to 30.00%, Molybdenum 5.00 to 7.00%, Manganese (Max) 1.00%, Silicon (Max) 1.00%, Iron (Max) 0.75%, Nickel (Max) 0.50%, Carbon (Max) 0.35%, Nitrogen (Max) 0.20%, Tungsten (Max) 0.20%, Oxygen (Max) 0.10%, Titanium (Max) 0.10%, Aluminum (Max) 0.10%, Phosphorus (Max) 0.020%, Boron (Max) 0.010%, Sulfur (Max) 0.010%
Ti	CT PowderRange Ti64	F, E	ASTM F3001	High Performance Titanium	R56400/ R56407	Ti6AL4V GD23, Ti6Al4V ELI-0406, CL 41Ti ELI	Titanium Balance, Aluminum 5.50 to 6.50%, Vanadium 3.50 to 4.50%, Iron (Max) 0.25%, Oxygen (Max) 0.13%, Carbon (Max) 0.08%, Nitrogen (Max) 0.05%, Hydrogen (Max) 0.012%
Al	CT PowderRange AlSi10Mg	F	AMS7018	Aluminum Alloy		AlSi10Mg, AlSi10Mg-0403	Aluminum Balance, Silicon 9.0-11.0%, Iron (Max) 0.55%, Manganese (Max) 0.45%, Magnesium 0.20-0.45%, Titanium (Max) 0.15%, Zinc (Max) 0.10%, Copper (Max) 0.05%, Lead (Max) 0.05%, Nickel (Max) 0.05%, Tin (Max) 0.05%

Additional standard powders are available upon request, and Carpenter Additive will partner with you to create custom metal powders to fit your exact specifications.



## Your trusted partner in metal powders for additive manufacturing

Carpenter Technology Corporation is a recognized leader in high-performance specialty alloy-based materials and process solutions for critical applications in the aerospace, defense, transportation, energy, industrial, medical, and consumer electronics markets.

**For additional information, please  
contact your nearest sales office:**

info@carpenteradditive.com | 610 208 2000