Advanced Materials for Consumer Product Applications





INNOVATION, QUALITY AND GLOBAL PRESENCE: THE CARPENTER ADVANTAGE.

CARPENTER SPECIALTY ALLOYS ADD QUALITY AND VALUE TO EVERYDAY LIVING.



EXPERT MATERIALS FROM MATERIALS EXPERTS

We understand the challenges design engineers face. Carpenter metallurgists, research scientists and engineers work closely with the industry's best to continually define and redefine the leading edge of materials technology.

Whether you're specifying a stainless steel or a precision, controlled-expansion alloy, Carpenter has the expertise to deliver.

A WIDE RANGE OF ALLOYS

By building on its history of materials experience, Carpenter has helped to advance industries as diverse as medicine, aerospace, automotive, industrial and power generation.

This has enabled us to leverage that expertise into other markets.

For example, an alloy originally created for use in jet fighters can also be found on the fairway: High-strength AerMet® alloy has added distance and accuracy to a golfer's swing.

BioBlu™ 27 alloy is a high strength, biocompatible alloy being used in the jewelry industry.

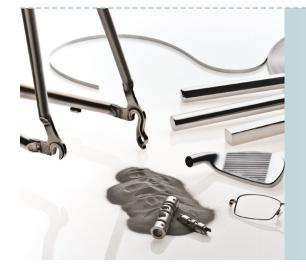
In all, Carpenter's selection of stainless steels, high-temperature alloys, high-strength alloys, superior corrosion-resistant alloys, magnetic and controlled-expansion alloys, and other specialty grades gives you one of the broadest ranges of specialty materials solutions available today.

For more information on Carpenter, including detailed technical information on hundreds of alloys, visit www.cartech.com or call 1-800-654-6543 in the United States.

TOTAL COMMITMENT IN MANUFACTURING, DELIVERY AND CUSTOMER SERVICE

Carpenter's quality systems are approved to ISO 9001:2008 and AS9100 standards. Product is manufactured to strict standards of quality and operational efficiency at our manufacturing facilities.

We have strategically located warehouses and operations centers in Asia, Europe, Mexico, Canada and the United States and an integrated communications system linking our worldwide offices to each other and to our mills. And our responsive sales and service professionals can quickly and accurately track order status, inventory and other essential delivery data.



Carpenter manufactures hundreds of specialty alloys and engineered materials that have been used in a wide variety of consumer applications throughout the world. We combine an industry-leading product offering with knowledgeable materials support, lot-to-lot consistency, and responsive delivery.

Whatever the application—home products, sports and leisure, personal care, communications technology or a host of others—you can count on Carpenter to deliver the specialty materials you need.



The Carpenter CTS™ family of blade alloys offers superior edge retention and surface finish, the ability to be machined to a fine edge, and consistent heat-treatability from lot to lot. These specialty alloys can be considered for a variety of high-performance consumer, industrial and medical knife blade applications.

DEPENDABLE MATERIALS YOU CAN COUNT ON WHEN PERFORMANCE MATTERS That's Carpenter's legacy and commitment: Embedded in the design and engineering process. Pioneering new materials and applications. Continually improving the materials development and manufacturing process. Committed to enabling the innovation and success of our consumer products customers.

ENGINEERED MATERIALS FOR A CHANGING WORLD

Carpenter Technology Corporation (NYSE:CRS) manufactures a wide range of stainless steels, specialty alloys and titanium alloys for the consumer industry.

Today, you'll find Carpenter alloys all around you. Carpenter's Dynamet subsidiary makes titanium products that have been used in eyeglasses, motocross, snowmobiles and sports equipment. Carpenter Powder Products supplies gas atomized, metallic powders that have been used to produce metal injection molded parts, including cell phone components, water faucet components and watch cases.

Whatever your application, you can count on Carpenter Technology to leverage our deep technical expertise and extensive materials experience to deliver high-quality engineered materials and components.

For more information, visit www.cartech.com.

In the United States call toll-free 1-800-654-6543.

High-Nickel Alloys

Glass Sealing "42" Glass Sealing "52" Kovar® alloy

Ultra High-Strength Alloys

AerMet® 100 Alloy AerMet 310 alloy Carpenter 275 Custom Age 625 Plus® alloy Custom 450® stainless Custom 455® stainless Custom 465® stainless Custom 475® stainless MP35N* alloy Type 440C **CARPENTER** manufactures hundreds of specialty alloys in round and shaped bar, plate, strip, hollow bar, wire and fine wire in wrought and Micro-Melt® powder metals. Below is a listing of some of our alloys that have been used in consumer product applications.

Superior Corrosion Resistant Alloys

BioBlu™ 27 alloy

Magnetic, Controlled-Expansion and Glass Sealing Alloys

485 Alloy Carpenter Invar 36® alloy Glass Sealing "42" Glass Sealing "52" Kovar® alloy High Expansion 22-3 High Expansion 25-8 High Expansion "72" Low Expansion "42"® alloy MagneDur® 20-4 Nickel 201 Mod Temperature Compensator "30"® alloy Temperature

Soft Magnetic Nickel-Iron Alloys

Compensator "80"

High Permeability "49"® alloy Carpenter HyMu "80"® alloy HyMu "80" Mark II

Resistance Alloys

CBX Cupron
Evanohm® Alloy R
No. 1 JR® alloy

Heating Element Alloys

Tophet® Alloy A
Tophet Alloy C

Stainless Steels

300 stainless steels 400 stainless steels Custom Flo 302HQ Project 70+® Type 316 Project 70+ Custom 630 TrimRite® stainless Trinamet® stainless Type 430FR Type 440B

Titanium Alloys

Ti 6Al-4V
Ti CP Grade 1
Ti CP Grade 2
Ti 3Al-8V-6Cr-4Mo-4Zr
Ti 3Al-2.5V

Cutting Blade Alloys

Carpenter CTS™ alloys

* MP35N is a trademark of SPS Technologies, Inc.

CARPENTER'S SPECIALTY ALLOYS MAY BE CONSIDERED FOR USE IN A WIDE VARIETY OF HOME, RECREATIONAL AND PERSONAL CARE APPLICATIONS

High-Nickel Alloys

- Big-screen televisions
- Digital light processors for projectors
- Light bulb leads

Ultra High-Strength Alloys

- Bicycle components
- Gears
- Golf club faces
- Motorsports

Superior Corrosion Resistant Alloys

- Jewelry
- Watch cases

Magnetic, Controlled-Expansion and Glass Sealing Alloys

- Eyeglasses and armless sunglasses
- Light bulb leads
- Thermostats

Soft Magnetic Nickel-Iron Alloys

- Cell phones
- Computers
- Computer modems
- Electric watt-hour meters
- Gas furnace safety switches
- Ground fault circuit interrupters
- Hearing aids
- Magnetic shielding of coaxial cables
- Printers

Resistance Alloys

- Cell phones
- Laptop computers

Heating Element Alloys

- Kitchen appliances
- Hair and clothes dryers

Stainless Steels

- Appliance fasteners
- Bathroom hardware
- Blender and industrial food processing blades
- Boating and marine fasteners and trim
- Boat rub rail
- Boat shafting
- Chains
- Concrete anchors
- Drawer slide balls
- Fish hooks and reels
- Food service conveyor fasteners
- Garage door fasteners
- General-purpose and precision springs
- Hand tools
- Helmet face masks
- Jet skis

- Jewelry
- Knives and cutlery
- Lacrosse stick shafts
- Lawn and garden equipment
- Marine outboard motors
- Motorcycle fasteners
- Scuba regulators
- Speed skating blade parts
- Televisions
- Water faucet components
- Yacht rigging

Tool Steels

- Cutting blades
- Hand tools

Titanium Alloys

- Eyeglasses
- Football face masks
- Motocross springs
- Racing bicycle components
- Snowmobile springs





FOLLOW CARPENTER. | facebook.com/CarpenterTech | twitter.com/CarpenterTech

The information and data presented herein are typical or average values and are not a guarantee of maximum or minimum values. Applications specifically suggested for material described herein are made solely for the purpose of illustration to enable the reader to make his/her own evaluation and are not intended as warranties, either express or implied, of fitness for these or other purposes. There is no representation that the recipient of this literature will receive updated editions as they become available.

Unless otherwise specified, registered trademarks are property of CRS Holdings, Inc., a subsidiary of Carpenter Technology Corporation.



Carpenter Technology Corporation Wyomissing, PA 19610 USA

1-800-654-6543 (toll-free inside U.S.) Visit us at www.cartech.com for a complete list of our global sales and service locations.