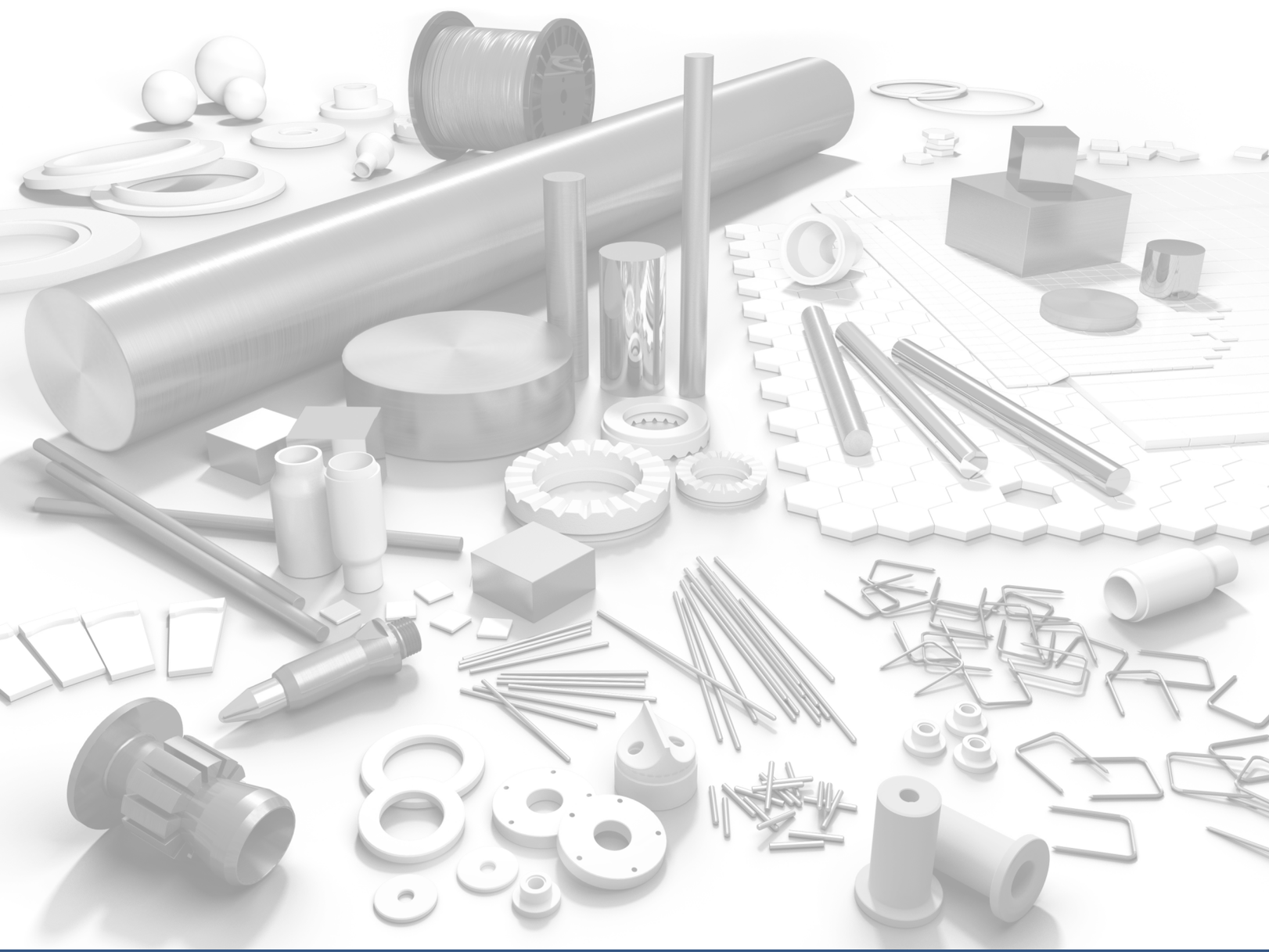


WELDSTONE

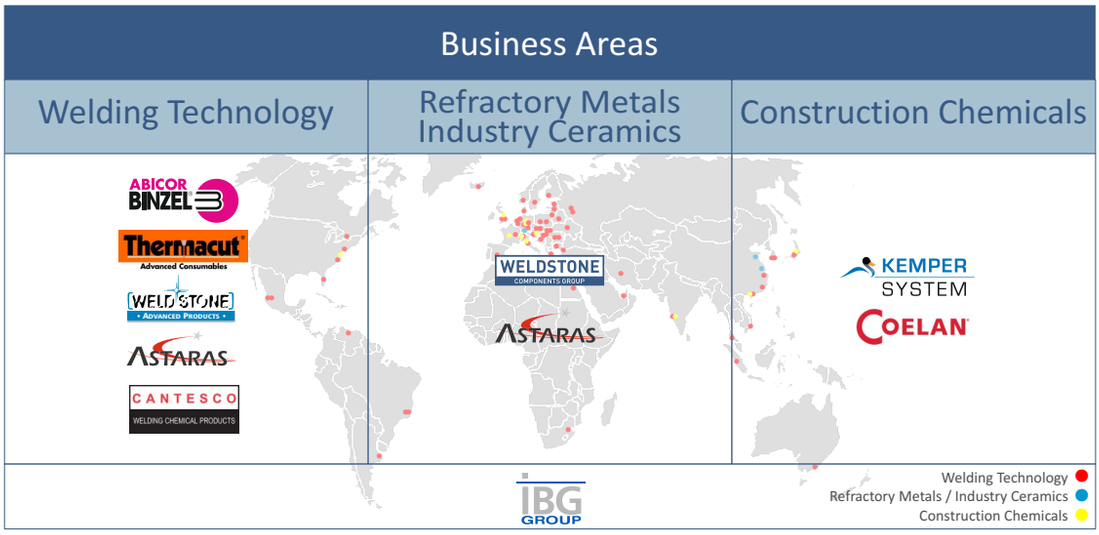
COMPONENTS GROUP



IBG GROUP

WELDSTONE

Weldstone is a member of the German based IBG-Group. With more than 50 international affiliated companies IBG has gained over the last 30 years leading positions in the fields of welding, tungsten and ceramic components as well as in the construction chemicals. Currently the group employs 2,000 people around the world.



Weldstone grew rapidly from a mid-size tungsten electrode production company to the market leader in TIG-electrodes. Weldstone expanded the business scope to other tungsten related markets such as tungsten heavy metal, tungsten-copper and specialty tungsten alloys.

Today, Weldstone is one of the leading manufacturers of tungsten products and serves the most demanding industries such as automotive, aerospace, medical, measuring devices and others.



Industries

Applications of Weldstone products are found in many different industries

Die Casting | Welding | Machines | Aerospace | Automotive | Spark Erosion

Cutting | Measuring | Injection Modling | Medical | Electronic | Coating

Furnance | Oil | Gas | Glass | Sports | Defense

Focus

In comparison to other suppliers, Weldstone has the advantage of owning many manufacturing facilities and has a broad network of global service companies. This makes us independent and guarantees you best possible product and service quality. Weldstone also focuses on their core values in everyday business. This includes treating not only the environment respectfully, but must importantly respectful and ethical dealings with our clients.

Own Production Sites | High Innovation | Reliable Quality | Professional Consulting | Ethics | Environment

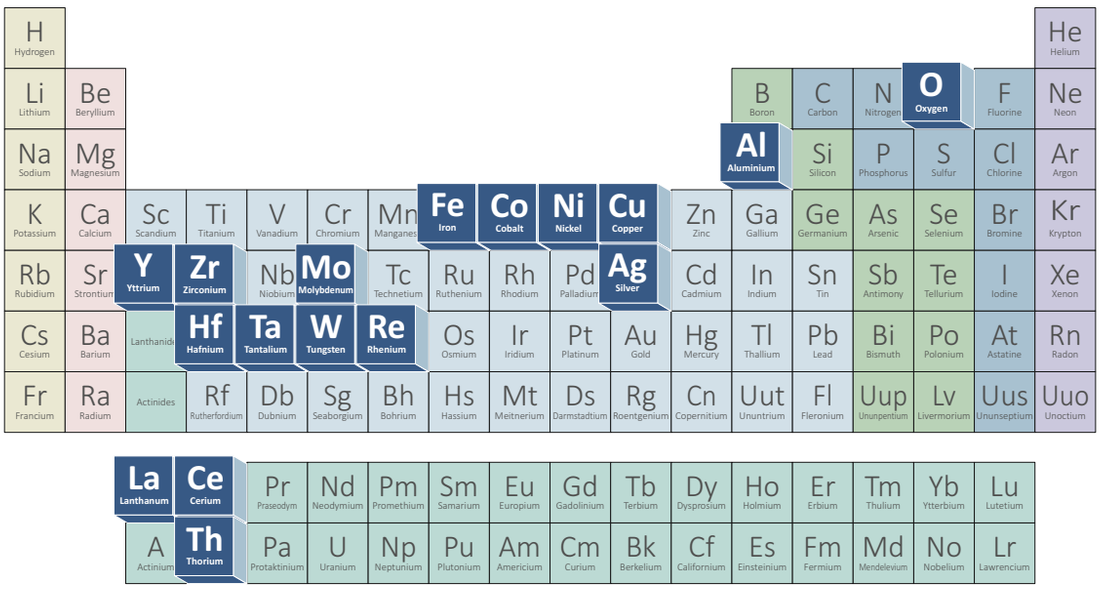




Materials

Basics

Weldstone products are mainly based of tungsten and molybdenum. By alloying and/or doping with other elements, special materials, or alloys, are created with extraordinary characteristics.



Characteristics

The outstanding characteristics of tungsten and molybdenum are high density, strength and stiffness even under the highest temperatures.



Density | Thermal Strength | Mechanical Strength | Shielding | Thermal Conductivity | Electrical Conductivity



ANVILOY® Tungsten Heavy Alloys

ANVILOY® is an internationally recognized brand which represents a product group comprising of tungsten heavy alloys.
Due to the high melting point of tungsten, ANVILOY® Products are produced in a powdered-metallurgical process. In these alloys, many of the outstanding characteristics of tungsten remain. That is the reason why these materials are very high in density. The high density is often directly applied like in vibration dampening weights or counter balance weights.
In shielding applications, the density is indirectly used due to its high absorption cross-section. ANVILOY® alloys are also very corrosion and temperature resistant and offer at the same time good electrical and thermal conductivity.
These properties are particularly used in high temperature applications, welding and die casting processes.
The high stiffness is the reason why ANVILOY® alloys are also used to dampen vibrations in precision tool holders.

ANVILOY® Tungsten Heavy Alloy Materials

magnetic

- ANVILOY® 170F
- ANVILOY® 175F
- ANVILOY® 173M
- ANVILOY® 180F
- ANVILOY® 185F

non-magnetic

- ANVILOY® 170C
- ANVILOY® 175C
- ANVILOY® 180C
- ANVILOY® 185C

special alloys for dies casting

- ANVILOY® 1050
- ANVILOY® 1150
- ANVILOY® 1350
- ANVILOY® Weld Rod

ANVILOY® products

- Counterbalance weights for crank shafts
- Aerospace components
- Tool holders
- Medical components
- Components for die casting molds and tools
- Shielding parts for measuring devices
- Furnace components
- Engine parts
- Weld rods
- Schweissstäbe

Further materials and products on request



TUCOMET® Tungsten-Copper

TUCOMET® is the newest member in the Weldstone brand family and stands for a wide range of extraordinary tungsten-copper products. For example, some examples include resistance welding electrodes, spark erosion, plasma spraying, contacts and heat sinks.

Tungsten-Copper materials are often produced by infiltration of a pressed or a pre-sintered tungsten body with copper. These new materials show the hardness and thermal resistance of tungsten combined with the thermal and electrical conductivity of copper. As tungsten does not get dissolved in copper due to its high melting point its specific conductivity remains.

These material's hardness mechanism are not temperature related and therefore TUCOMET® Tungsten-Copper is very tempering resistant. These materials can be called tungsten alloys and therefore can be machined easily.

The material combination of tungsten and copper are not only available as alloys bodies in micro binding but also macro binding. A special connecting process guarantees best possible contact and heat transfer at very high strength and temperature resistance. By this process the high hardness and minimum of energy loss provide long a lifetime and performance for resistance welding. Another reason for improved performance of TUCOMET® materials is that due to the high melting point, soldering between electrode and work piece is minimized.

TUCOMET® materials

- TUCOMET® 70
- TUCOMET® 75
- TUCOMET® 80
- TUCOMET® 90

TUCOMET® products

- Spot welding
- Projection welding
- Resistance seam welding
- Resistance butt welding
- Capacitor discharge welding
- Stud welding
- Flash butt welding

Further materials and products on request



TIG-electrodes

E3® TIG- electrodes have been exclusively developed with a team of welding engineers from the sister company Abicor Binzel in cooperation with its top clients and Weldstone metallurgical experts and production engineers. For already quite some time E3® electrodes substitute the formerly popular radioactive WT20 TIG-electrodes in the welding departments of leading companies.
E3® TIG- electrodes are not only radiation free and environmentally friendly, but often also shows superior performance compared to all other electrodes available today. E3® electrodes are trend-setters regarding safety and reliability and will influence the TIG-welding world significantly in the future.



E3® TIG electrodes

- TIG-electrodes
- Orbital welding electrodes
- Inserts for plasma electrodes
- Arc-Source for ANVILOY® Weld Rods

Industrial Ceramics

Similar to the high-melting refractory metals, Tungsten and Molybdenum and also Ceramic products are produced from prepared powder mixtures. Besides pressing of powder, also production processes, which implement plasticized materials, are increasingly used.
Through alloying with lower melting phases, bodies with high density can be created with temperatures less than 2,000°C. Depending on the application, the sintered products are then treated through grinding processes.

Ceramic materials

- Al_2O_3 92%
- Al_2O_3 94%
- Al_2O_3 96%
- Al_2O_3 98%

Ceramic products

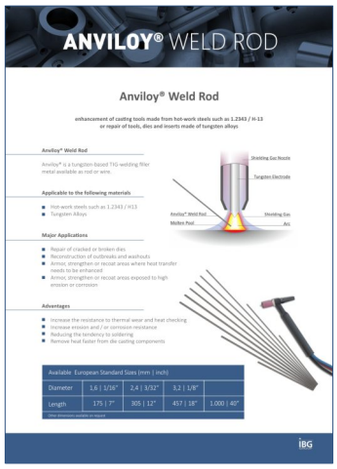
- gas nozzles
- sealing rings
- wear resistance components
- FCP-components

Further materials and products on request

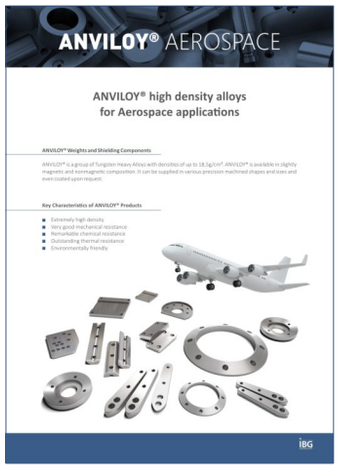




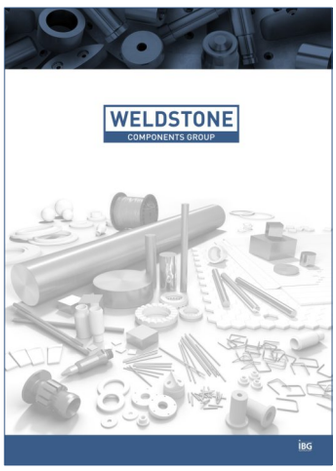
This and additional brochures can be downloaded at **www.weldstone.com**



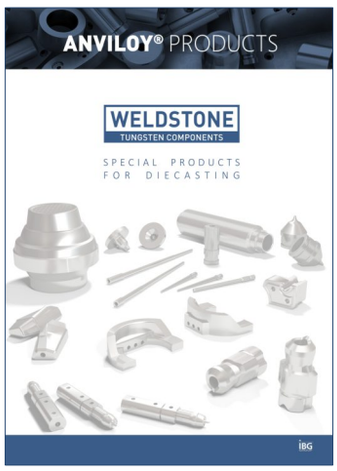
ANVILOY® Weld Rod



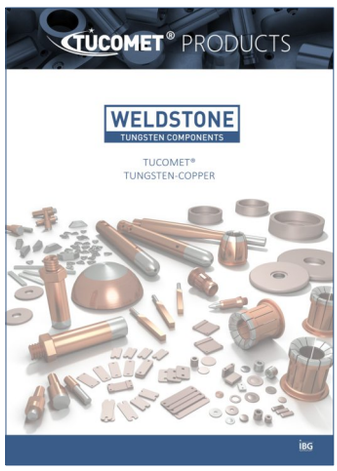
ANVILOY® Aerospace



Weldstone



ANVILOY® Die Casting



TUCOMET® Tungsten-Copper

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