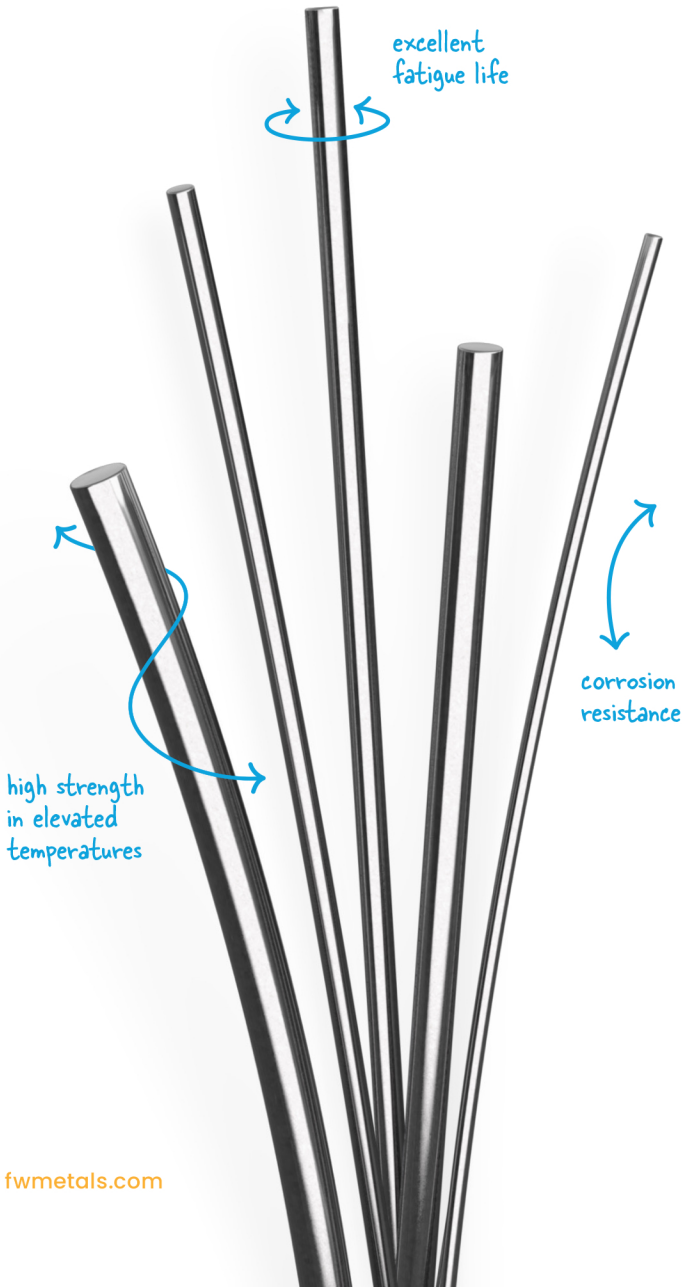




High-performance alloys

Specialized materials optimized for demanding applications



Premium high-performance alloys

High-performance alloys are designed to take on the challenges of an ever-changing world. These exactly engineered materials offer a range of properties such as strength, fatigue resistance, ductility, good biocompatibility, and corrosion resistance to withstand the demands of critical applications.

Understanding high-performance alloys

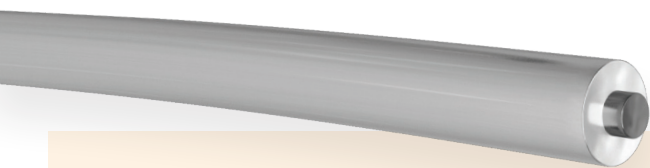
There is no unified definition for what makes a high-performance alloy, which is sometimes called a superalloy. Many of the most common high-performance alloys are nickel or cobalt based. They can usually operate in high-heat environments for extended periods of time and offer high strength and corrosion resistance.

At Fort Wayne Metals, we routinely process the following high-performance alloys:

- › 35N LT™ alloy
- › FWM™ 1058 alloy
- › FWM™ 1537 alloy
- › L-605 alloy
- › MP35N® alloy
- › Tungsten

Leveraging composite wire

Composite wires combine the properties of dissimilar materials in a single wire system. The outer sheath, often made of a high-performance alloy, provides strength or a degree of biocompatibility while protecting the core material, which can provide key properties, such as superelasticity, conductivity, radiopacity, resiliency, or MRI enhancement. Common sheath materials for composite wires include 35N LT™ alloy, MP35N® alloy, and FWM™ 1058 alloy.



Enhanced solutions

NDR® wire offers greater fatigue life without altering the chemical properties of the material. Using a proprietary thermal-mechanical treatment designed to produce nanoscale microstructure refinement, NDR® wire provides increased performance under repeated use while maintaining properties equivalent to conventional wire.



Typical end uses

Our customers use high-performance alloys in their most challenging applications, such as implantable devices that need to perform even with rigorous use. Some of the most common include:

- › Hip and knee replacements
- › Orthodontic appliances
- › Spinal rods and screws
- › Stents
- › Surgical clips
- › Vena cava filters

Product forms and capabilities

High-performance alloys can be processed to meet a variety of needs. Below are some of the product forms most commonly made with high-performance alloys:

BAR polished bar made to tight tolerances

COATING electrical insulation or chemical separation with custom coatings

COMPOSITE WIRE two dissimilar materials in a single wire construction

FLAT WIRE wire with a rectangular cross section

HHS* TUBE improved torqueability and kink resistance, plus an open working channel

MECHANICAL ASSEMBLY custom crimps, fittings, and specialized parts

ROUND WIRE wire with a circular cross section

SHAPED WIRE wire with specialty shaped cross sections

SLT* WIRE straightness, grindability, and torque transmission to help streamline production

STRANDS AND CABLES complex constructions for advanced applications



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