PYROMET® 680

Pyromet 680 is a nickel-chromium-iron solid solution-strengthened alloy known for its excellent resistance to oxidation and carburization in high-temperature environments.

Also known as X, Pyromet 680 is often used in high-temperature applications, such as furnace parts, gas turbine parts, heat-treating equipment, and chemical and petrochemical processing. The alloy has a **high melting point and retains its strength even when exposed to extreme temperatures.** It is also resistant to corrosion, making it a durable choice for many industrial applications.

Similar alloy: 718

KEY FEATURES OF PYROMET 680

- **High-temperature resistance:** Pyromet 680 is known for its excellent resistance to high temperatures. This makes it an ideal choice for applications such as furnace parts, gas turbine parts, and heat-treating equipment. As an example, the combustor and afterburner on GE F404 engine (used on the F-117 and the F-18 Hornet) were made with a Pyromet 680 type of material.
- **Oxidation and carburization resistance:** This alloy is highly resistant to oxidation and carburization, even in high-temperature environments. This ensures the longevity and durability of the products made from it.
- **Corrosion resistance:** With high chromium content, Pyromet 680 is also resistant to corrosion, making it a durable choice for many industrial applications. This can result in lower maintenance costs and longer product life.
- **Versatility:** Due to its high melting point and strength retention at extreme temperatures, Pyromet 680 can be used in a wide range of applications, including chemical and petrochemical processing.
- **Durability:** The strength and resistance properties of Pyromet 680 make it a long-lasting material, potentially reducing replacement costs and downtime in industrial applications.
- **Manufacturability:** Pyromet 680 can be easily hot worked into various forms thanks to its excellent ductility. It can also be cold worked. Pyromet 680 also has good welding characteristics.

Explore Pyromet 680 in depth, along with our full alloy portfolio
CarpenterTechnology.com/Performance