

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 Hastelloy 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

* Hastelloy X is a registered trademark of Haynes.



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.

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