

# 440C

440C is a high-carbon chromium stainless steel designed to provide moderate stainless properties with maximum hardness.

440C can be found in a diverse range of applications owing to the **excellent wear resistance coupled with corrosion resistance**. This alloy is magnetic and is used in the hardened and tempered condition. On tempering, chrome carbide precipitation from the martensitic matrix ensures good abrasion and wear resistance. Examples of applications leveraging 440C's high hardness and corrosion resistance include aerospace valves, ball bearings, cutlery, and surgical instruments.

**Similar alloys:** 420 (HC), 440A, 440B, 440F SE, Micro-Melt® 440C



## KEY FEATURES OF 440C

- **High hardness:** With a hardness of approximately 60 HRC, 440C is one of the hardest stainless steels. This makes it an excellent choice for applications where durability and resistance to wear are crucial.
- **Excellent wear resistance:** The high carbon content of 440C gives it superior resistance to abrasion and wear. This makes it ideal for use in high-wear environments, such as bearings and valve parts.
- **Good heat and corrosion resistance:** The high chromium content in 440C provides good resistance to heat and moderate resistance to corrosion. This makes it suitable for use in a variety of challenging environments.
- **Versatility:** 440C is used in a wide range of industries, from cutlery and bearings to surgical instruments and aerospace. This demonstrates its versatility and wide-ranging applicability.
- **Magnetic properties:** 440C is magnetic in all conditions, which can be a beneficial property in certain applications.
- **High-quality tooling material:** Despite its challenges in welding and forming, 440C is a popular choice for tooling due to its hardness and resistance to wear.

