



Grade	Code	AISI	Martensitic Stainless Steel
1.4112	X90CrMoV18	440B	

Steel Properties

Moderate corrosion resistance characterizes the martensitic material 1.4112 as well as very high wear resistance, which is ensured by the high carbon content and the possibility of hardening.

1.4112 should be borne in mind that the addition of chromium at the level of 17-18% is necessary to maintain the corrosion resistance of steel with such a high carbon range, which is associated with limited applications in slightly more aggressive environments. Molybdenum increases resistance to oxidation at higher temperatures, and Vanadium is responsible for increasing the hardness of the product.

Chemical Composition (1.4112)

C %	P %	Si %	Mn %	S %	Cr %	Mo %	Ni %	V %	Cu %
0,85 – 0,95	0,04 max.	1,00 max.	1,00 max.	0,03 max.	17,00 – 19,00	0,90 – 1,30	-	0,07 – 0,12	-

Suitable For

AISI 440B is used on knives, surgical cutting tools, mold inserts and active elements in the plastics processing industry, even in chemically aggressive molding compounds. Shape- and flat-knives in the food industry, for example for frozen goods, beef and pork splitting blades, perforated discs and other accessories, for meat grinders, shaped knives for fish processing. Devices in tooling, workpiece support and clamping devices in the automotive industry.

Remarks

AISI 440B is characterized by high hardness >55 HRC, while maintaining good resistance to corrosive environments and resistance to operating temperatures <400 °C.

Specification

1.4112, AISI 440B, X90CrMoV18