

ABRAMAX 420 Cr

Abramax 420 Cr is a wear-resistant steel with special heat resistance, as well as corrosive environment resistance. It is delivered in quenched and tempered condition, which gives it hardness at about 400 HBW, as well as workshop-friendly properties. Abramax 420 Cr will provide increased service life in comparison to conventional wear-resistant steels, especially when exposed to elevated temperatures.

Abramax 420 Cr gives improved processing possibilities. It comes along with excellent cold forming, machining

and welding properties. Its quenched and tempered microstructure provides full repeatability of forming with tight bending radii as well as narrow and hard heat affected zone after thermal cutting and welding.

Typical application markets for Abramax 420 Cr are: energy, mining, quarries, recycling, yellow goods and elevated temperature industries.

CHEMICAL ANALYSIS (max values)

C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Mo (%)	Ni (%)	B (%)
0.15	0.3	1.5	0.020	0.010	2.5	0.2	0.2	0.004

MECHANICAL PROPERTIES (typical values)

Hardness (HBW)	Yield strength (MPa)	Tensile strength (MPa)	Elongation A5 (%)	Impact strength (KV -20°C, J)
400	1000	1250	12	40

Hardness range (delivery condition): 370–430 HBW*

*Brinell hardness measured according to EN ISO 6506-1, on a milled surface below surface typically 0,5–3 mm depending on plate thickness.

Dimensions

Abramax 420 Cr is delivered in thickness range 4–80 mm and typical widths and lengths as well as special dimensions required by the customer at the time of delivery.

METALLURGICAL CONCEPT

Abramax is the next evolution of wear-resistant steels. Thanks to specially selected alloy combinations based around chromium and combined with sequences of modern heat treatments, it is not only labeled as a “wear-resistant” steel, but also as a “heat-resistant” steel as well. Additionally, fully dissolved chromium gives very good hardenability, which enables the use of modern quenching processes. Modern water quenching methods and subsequent refined heat treatments allows it to

achieve high hardness and very good heat resistance as well as equalized internal stress levels. What is more, high chromium content provides increased resistance to corrosive materials.

Abramax is produced by the world leader in continuously developed quenched and tempered steels, delivering ultimate steel cleanliness and extended properties. Moreover, it guarantees unique properties and consistency from plate to plate.