

voestalpine HIGH PERFORMANCE METALS

AISI 431 / 1.4057 / UNS43100

DESCRIPTION

431 heat treated 850 – 1000 Nmm² martensitic, nickel bearing grade. Good corrosion resistance, excellent tensile and torque strength and good toughness. This grade can not be readily cold worked and is therefore not recommended for cold heading and bending.

NEAREST STANDARDS

AISI	DIN	BS	UNS
431	1.4057 / X20CrNi16-2	431S29	S43100

CHEMICAL ANALYSIS (AVE %)

C	Si	Mn	Ni	Cr	Mo	S	P
0.19	0.25	0.40	1.60	15.90	-	0.025	0.025

HEAT TREATMENT (RECOMMENDED)

Forged	800-100c. Cool in furnace
Anneal	680-800c. Cool slowly in controlled furnace
Harden	950-1050c. Oil or Air
Temper	600-650c. Hold of 1hr min at temperature. Air cool.

MECHANICAL PROPERTIES (HEAT TREATED)

Tensile Mpa (Rm)	Yield Strength (MPa)	Elongation (%)	Impact Toughness (J)
850-1000	600	12	25

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SUPPLY CONDITION

Quench & Tempered

SURFACE TREATMENT

Machined (k12)

Ground (h8)

Peeled & Polished (h9)

SIZE RANGES

For stocked sizes and to view availability at your local branch, visit the vHPM Australia Webshop
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PERFORMANCE IS IN OUR DNA

voestalpine High Performance Metals is the global market leader in the production of tool steels and one of the world's leading suppliers of high-speed steels, valve steels, special steels, powder metallurgy steels, and nickel-based alloys. We also manufacture die-forged components and large castings from nickel-based alloys and high, medium and low alloy steels.

Customers rely on our key brands of Bohler, Uddeholm and Villares, to set the highest standards of innovation, quality and service across a wide range of industries including automotive, aerospace, consumer electronics and oil & gas. We are fully integrated from steel production through to local customer sales, ensuring we keep our customers One Step Ahead.

EXPLORE WHAT IS POSSIBLE.



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ONE STEP AHEAD.