

Dura 420/4031

General characteristics

Martensitic grade with medium-high hardness . Corrosion resistant in water and steam. Applied for cutting utensils, surgical instruments, measuring tools, mechanical parts subject to wear.

Typical applications

- Cutting utensils
- Surgical instruments
- Measuring tools
- Mechanical parts subject to wear

Products & dimensions

Cold rolled products, available dimensions (mm)

Surface finish		Coil / Strip		Plate / Sheet	
		Thickness	Width	Thickness	Width
2B	Cold rolled, heat treated, pickled, skin passed	0.50-3.50	30-1250	0.50-3.50	350-1250
2BB	Bright-pickled	0.50-3.50	30-1350	0.50-3.50	600-1300
2C	Cold rolled, heat treated	0.60-4.00	30-1350		
2D	Cold rolled, heat treated, pickled	0.50-4.00	30-1350	0.50-3.50	600-1300
2E	Cold rolled, heat treated, mech. desc. pickled	0.50-5.00	30-1350	0.50-3.50	600-1300
2G	Ground	0.50-3.00	30-1350	0.50-3.00	600-1300
2H	Work hardened	0.50-3.00	30-1350	0.50-3.00	600-1350
2J	Brushed or dull polished	0.50-3.00	30-1350	0.50-3.00	600-1300
2R	Cold rolled, bright annealed	0.05-1.50	3-649		

Continous hot rolled products, available dimensions (mm)

Surface finish		Coil / Strip		Plate / Sheet	
		Thickness	Width	Thickness	Width
1C	Hot rolled, heat treated, not descaled	5.00-8.00	50-1350		
1D	Hot rolled, heat treated, pickled	5.00-5.50	30-1250	5.00-5.50	350-1250
1U	Black hot rolled	5.00-8.00	50-1350		

Chemical composition

The chemical composition is given as % by weight.

	C	Mn	Cr	Ni	Mo	N	Other
Typical	0.38		13.5				
EN 10088-2	0.36-0.42	≤1.0	12.5-14.5				
EN 10088-3	0.36-0.42	≤1.0	12.5-14.5				

Corrosion resistance

Pitting corrosion resistance		Crevice corrosion resistance
PRE	CPT	CCT
14	<10	<0

PRE Pitting Resistant Equivalent calculated using the formula: $PRE = \%Cr + 3.3 \times \%Mo + 16 \times \%N$

CPT Corrosion Pitting Temperature as measured in the Avesta Cell (ASTM G 150), in a 1M NaCl solution (35,000 ppm or mg/l chloride ions).

CCT Critical Crevice Corrosion Temperature is the critical crevice corrosion temperature which is obtained by laboratory tests according to ASTM G 48 Method F

Mechanical properties

Cold rolled coil and sheet	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Elongation ¹⁾ %	Impact strength J	Rockwell	HB	HV
EN 10088-2			≤ 760	≥ 12				

Hot rolled coil and sheet	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Elongation ¹⁾ %	Impact strength J	Rockwell	HB	HV
EN 10088-2			≤ 760	≥ 12				

¹⁾Elongation according to EN standard:

A₈₀ for thickness below 3 mm.

A for thickness = 3 mm.

Elongation according to ASTM standard A₂ or A₅₀.

Physical properties

Density	Modulus of elasticity	Thermal exp. at 100 °C	Thermal conductivity	Thermal capacity	Electrical resistance	Magnetizable
kg/dm ³	GPa	10 ⁻⁶ /°C	W/m°C	J/kg°C	μΩm	
7.7	215	10,5	30	460	0.55	Yes

Fabrication

Standards & approvals

Standard	Designation
----------	-------------

Contacts & Enquiries

Contact your nearest sales office

www.outokumpu.com/contacts

Working towards forever.

We work with our customers and partners to create long lasting solutions for the tools of modern life and the world's most critical problems: Clean energy, clean water and efficient infrastructure. Because we believe in a world that lasts forever.

Information given in this brochure may be subject to alterations without notice. Care has been taken to ensure that the contents of this publication are accurate but Outokumpu and its affiliated companies do not accept responsibility for errors or for information which is found to be misleading. Suggestions for or descriptions of the end use or application of products or methods of working are for information only and Outokumpu and its affiliated companies accept no liability in respect thereof. Before using products supplied or manufactured by the company the customer should satisfy himself of their suitability



outokumpu.com
steelfinder.outokumpu.com