

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
EN 10088-2	1.4031
EN 10088-3	1.4031

Contacts & Enquiries

Contact your nearest sales office

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