

SIDUR^{...} 3401

NON-MAGNETIC ABRASION RESISTANT STEEL

SIDUR 3401 is a non-magnetic abrasion resistant steel well-known for its high abrasion resistance. In as-delivered condition, this steel exhibits a moderate hardness up to 240 HB. During operation under high impact loads, the hardness can increase up to 600 HB due to the work hardening effect. During work hardening, the steel preserves high impact toughness even at low operating temperatures.

STANDARDS

- General technical delivery requirements in accordance with EN 10021.
- Tolerances on dimensions and shape according to EN 10029, EN 10051 and EN 10131.
- Delivery requirements for surface condition according to EN 10163-2.
- Ultrasonic testing according to EN 10160.
- Tensile testing at room temperature according to EN ISO 6892-1.
- Impact testing according to EN ISO 148-1.
- Brinell hardness testing according to ISO 6506-1.
- Standard specification for steel castings, austenitic manganese ASTM A128.

CHEMICAL COMPOSITION

SIDUR 3401	C	Si max.	Mn	P max.	S max.	Cr max.
in %	1.1-1.20	0.4	11.0-13.0	0.02	0.001	0.55

MECHANICAL PROPERTIES

Product form	Mechanical properties in solution annealed condition			
	R _{p0.2} [MPa]* min.	R _m [MPa]*	A _{5.65} [%]* min.	Hardness [HB] max.
quarto plate	350	800-1100	30	240
hot-rolled sheet	350	800-1100	30	240
cold-rolled sheet	350	800-1100	30	240

* For transverse tensile flat test pieces.

Thickness [mm]	Impact toughness*		
	Testing direction	Temperature [°C]	KV ₂ [J] min.
6–80	transverse	20	160

* Measured on standard specimen 10 x 10 x 55 mm in solution annealed condition. The specified minimum value is the average of 3 tests. One individual value may be below the minimum average value specified, provided that it is not less than 70 % of that value. For plate thickness below 12 mm, subsize specimens shall be used. The minimum values of subsize specimens shall be reduced in direct proportion to the cross-sectional area of the test piece.

DELIVERY CONDITION

- Hot-rolled quarto plates in solution annealed condition
- Hot-rolled sheets in solution annealed condition
- Cold-rolled sheets in solution annealed condition*

* Cold rolled sheets in as-rolled condition available on request

DIMENSIONS

Thickness [mm]	Product form	Width [mm] max.	Length [mm] max.
8–80	quarto plate	2500*	12500
6–7.9	quarto plate	2000*	12500
3–5	hot-rolled sheet	1000	1000–6000
2–2.9	cold-rolled sheet	1000	1000–3000**

* 2060/2560 mm – if quarto plates are ordered with untrimmed rolling edges.

** cold-rolled sheets in as-rolled condition available up to 4000 mm.

SURFACE CONDITION

PRODUCT	Surface condition
quarto plate	sandblasted
quarto plate	sandblasted and anti-corrosion painted*
hot-rolled sheet	not descaled
cold-rolled sheet	not descaled

* Maximum width of the anti-corrosion painted plates is 2000 mm. Thickness of the coating is 20–60 µm.

INSPECTION DOCUMENTS

The type of document shall be agreed upon at the time of enquiry and order. A test certificate according to EN 10204/3.1 is issued mandatory.

The information and data in this product data sheet are intended for informative purpose only and may be revised at any time without notice. Presented typical properties of the materials are described only to help readers make their own evaluations and decisions. They are not guaranteed.