

Forta 304L/4307

EN 1.4307, ASTM TYPE 304L / UNS S30403

General characteristics

Forta 304L/4307 is a low-carbon alternative to Core 304/4301. Forta 304L/4307 is an all-purpose product with good resistance to atmospheric and intergranular corrosion.

Typical applications

- Steel constructions
- Containers
- Vehicle chassis

Products & dimensions

Cold rolled products, available dimensions (mm)

Surface finish		Coil / Strip		Plate / Sheet	
		Thickness	Width	Thickness	Width
2H	Work hardened	0.05-6.00	3-1530	0.30-6.00	18-1530

Chemical composition

The typical chemical composition for this grade is given in the table below, together with composition limits given for the product according to different standards. The required standard will be fully met as specified on the order.

The chemical composition is given as % by mass.

	C	Mn	Cr	Ni	Mo	N	Other
Typical	0.02		18.1	8.1			
ASME II A SA-240	≤0.030	≤2.00	17.5-19.5	8.0-12.0		≤0.10	
ASTM A240	≤0.030	≤2.00	18.0-20.0	8.0-12.0		≤0.10	
ASTM A666	≤0.030	≤2.00	18.0-20.0	8.0-12.0		≤0.10	
EN 10028-7	≤0.030	≤2.00	17.5-19.5	8.0-10.5		≤0.10	
EN 10088-2	≤0.030	≤2.0	17.5-19.5	8.0-10.5		≤0.10	
EN 10088-3	≤0.030	≤2.00	17.5-19.5	8.0-10.5		≤0.10	
EN 10088-4	≤0.030	≤2.0	17.5-19.5	8.0-10.5		≤0.10	

IS 6911	≤0.030	≤2.00	17.5-19.5	8.0-12.0	≤0.70	≤0.10	
IS 6911	≤0.030	≤2.00	17.5-19.5	8.0-12.0	≤0.70	≤0.10	

Corrosion resistance

Pitting corrosion resistance		Crevice corrosion resistance
PRE	CPT	CCT
18	<10	<0

Pitting Resistance Equivalent (PRE) is calculated using the following formula: $PRE = \%Cr + 3.3 \times \%Mo + 16 \times \%N$
Corrosion Pitting Temperature (CPT) as measured in the Avesta Cell (ASTM G 150), in a 1M NaCl solution (35,000 ppm or mg/l chloride ions).

Critical Crevice Corrosion Temperature (CCT) is obtained by laboratory tests according to ASTM G 48 Method F

For information on corrosion resistance properties in different environments, [use the online corrosion tables](#).

For more detailed information, please refer to the [Outokumpu Corrosion Handbook](#).

Mechanical properties

Cold rolled coil and sheet	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Impact strength J	Rockwell	HB	HV
Typical (thickness 1 mm)	295	325	650				
ASME II A SA-240	≥ 170		≥ 485			≤ 201	
ASTM A240	≥ 170		≥ 485		≤ 92HRB	≤ 201	
EN 10028-7	≥ 220	≥ 250	520 - 700				
EN 10088-2	≥ 220	≥ 250	520 - 700				
EN 10088-4	≥ 220	≥ 250	520 - 700				
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201	
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201	

Hot rolled coil and sheet	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Impact strength J	Rockwell	HB	HV
Typical (thickness 4 mm)	290	345	620			175	
ASME II A SA-240	≥ 170		≥ 485			≤ 201	
ASTM A240	≥ 170		≥ 485			≤ 201	
EN 10028-7	≥ 220	≥ 250	520 - 700				
EN 10088-2	≥ 220	≥ 250	520 - 700				
EN 10088-4	≥ 220	≥ 250	520 - 700				
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201	
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201	

Hot rolled quarto plate	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Impact strength J	Rockwell	HB	HV
Typical (thickness 15 mm)	260	300	580				
ASME II A SA-240	≥ 170		≥ 485		≤ 92HRB	≤ 201	
ASTM A240	≥ 170		≥ 485		≤ 92HRB	≤ 201	

EN 10028-7	≥ 200	≥ 240	500 - 700			
EN 10088-2	≥ 200	≥ 240	500 - 700			
EN 10088-4	≥ 200	≥ 240	500 - 700			
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201
IS 6911	≥ 170		≥ 485		≤ 92HRB	≤ 201

Wire rod	R _{p0.2} MPa	R _{p1.0} MPa	R _m MPa	Impact strength J	Rockwell	HB	HV
Typical	280	320	580				

¹⁾Elongation according to EN standard:

A₈₀ for thickness below 3 mm.

A for thickness = 3 mm.

Elongation according to ASTM standard A₂^o or A₅₀.

Physical properties

Values according to EN 10088

Density kg/dm ³	Modulus of elasticity GPa	Thermal exp. at 100 °C 10 ⁻⁶ /°C	Thermal conductivity W/m°C	Thermal capacity J/kg°C	Electrical resistance μΩm	Magnetizable
7.9	200	16.0	15	500	0.73	No*

*) Austenitic stainless steel grades may be magnetizable to a certain degree after cold deformation, e.g. in temper rolled condition.

Fabrication

More detailed information concerning welding procedures can be obtained from the Outokumpu Welding Handbook, available from our sales offices.

Standards & approvals

This grade is often double certified as EN 1.4301/1.4307, ASTM Type 304/304L.

Standard	Designation
ASME SA-240M Code Sect. II. Part A	TYPE 304L / UNS S30403
ASTM A240/A240M	TYPE 304L / UNS S30403
ASTM A666	TYPE 304L / UNS S30403
EN 10028-7, PED 2014/68/EU	1.4307
EN 10088-2	1.4307
EN 10088-3	1.4307
EN 10088-4	1.4307
IS 6911, AMENDMENT NO. 2	ISS 304 S2; ISS 304L

[Download Outokumpu manufacturing site certificates and approvals.](#)

Contacts & Enquiries

Contact your nearest sales office

www.outokumpu.com/contacts

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