

Stainless steel electrode

Classification

AWS A5.4 : E310-15*
EN 1600 : E 25 20 B 12

Temperature range

pressurized parts : -20 ... +400°C
scaling resistance : 1100°C

*: Deviation, see remarks

General description

Basic coated electrode for all position welding except vertical down
Fully austenitic weld metal with high Cr and Ni content for very high service temperature
High resistance against oxidation and scaling up to 1100°C
Avoid service temperatures between 650 - 850°C
Weldable on DC only

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3Gup PE/4G

Current type

DC +

Chemical composition (w%), typical, all weld metal

C	Mn	Si	Cr	Ni
0.1	3.0	0.3	25.0	21.0

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J) +20°C
Required: AWS A5.4		not required	min. 550	min. 30	not required
EN 1600		min. 350	min. 550	min. 20	not required
Typical values	AW	440	600	30	100

Packaging and available sizes

	Diameter (mm)	2.5	3.2	4.0
	Length (mm)	350	350	350
Unit: Box	Pieces / unit	135	150	100
	Net weight/unit (kg)	2.4	4.3	4.3

Identification

Imprint: INTHERMA 310 B

Tip Color: light green

Intherma® 310B: rev. EN 21

Materials to be welded

Steel grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM/ACI	UNS
Heat resisting steels					
	X10 CrAl 24		1.4762		
		GX25 CrNiSi 18-9	1.4825		
		GX40 CrNiSi 22-9	1.4826		
	X15 CrNiSi 20-12		1.4828		
		GX25 CrNiSi 20-14	1.4832		
	X15 CrNiSi 25-20		1.4841	310S	S31008
				CK20	J94202
	X12 CrNi 25-21		1.4845		
		GX40 CrNiSi 25-20	1.4848	HK40	

Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.5 x 350	60 - 70							
3.2 x 350	80 - 90							
4.0 x 350	110 - 130							

* stub end 35 mm

Remarks/ Application advice

Deviations: chemical composition

Mn = max. 5.0%

AWS: Mn = 1.0 - 2.5%