

Stainless steel electrode

Classification

EN 1600-97 : E 25 4 R 12*

* Deviation: see remarks

Temperature Range

pressurized parts: -10 ... +350°C
scaling resistance: +1100°C

General description

A rutile-basic all position stainless steel electrode

Typical applications:

- Buffer electrode, hardfacing on mild steels
- welding Cr-steels
- High corrosion resistance
- high proof stress and Tensile strength

A ferritic/austenitic structure

Good weldability and easy slag release

Weldable on AC and DC + polarity

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PE/4G PF/5G up

Current type

AC / DC electr. +

Approvals

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

C	Mn	Si	Cr	Ni
0.08	0.7	1.2	25.0	4.5

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: EN 1600-97		min. 400	min. 600	min. 15	not required
Typical values	AW	500	700	15	30

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: Box	Pieces / unit (nominal)	135	150	100	65
	Net weight/unit (kg)	2.7	4.8	4.8	6.1

Identification

Imprint: Arosta 329

Tip colour: orange

Arosta® 329: rev. EN 15

Materials to be welded

Steel grades	EN 10088-1/-2	EN 102 13-4	W.Nr.	ASTM/ACI
Base metals		GX30 CrSi 6	1.4710	
for high	X10 CrSi 6		1.4712	502
temperature	X10 CrAl 7		1.4713	502
application				403/405-TP405-CA15
Center of weld	X10 CrAl 13		1.4724	410/414-TP405-CA15
to be weld		GX40 CrSi 17	1.4740	
with Arosta 309S	X10 CrAl 18		1.4742	430B-TP430-CB30
cap layers		GX40 CrSi 23	1.4745	TP433
welded with	X10 CrAl 24		1.4762	TP443
Arosta 329	X20 CrNiSi 25-4		1.4821	TP329
		GX40 CrNi 24-5	1.4822	TP329
		GX40 CrNiSi 27-4	1.4823	TP329HC

- Applications at high temperature when high Ni-content is unacceptable

- Also very well suitable for hard surfacing in sea water corrosion resisting Application

Calculation data

Sizes Diam. x length (mm)	Current range type (A)	Current	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	40 - 70	DC+	59	94	0.73	19.5	85	1.64
3.2 x 350	60 - 110	DC+	58	122	1.2	31.4	50	1.56
4.0 x 350	80 - 140	DC+	72	273	1.5	46.5	34	1.59
5.0 x 450	140 - 190	DC+	98	542	2.2	94.4	17	1.59

* stub end 35mm

Welding parameters, optimum fill passes

Welding position: Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	70	70	70	60	60	60
3.2	100	100	100	70	70	70
4.0	140	140	140	80		
5.0	180	180	180			

Remarks

Deviations: chemical composition:

Si = max. 1.5%

EN: Si = max. 1.2%