

Ferrod 165A

High recovery rutile electrode

Classification

AWS A5.1 : E7024-1
 ISO 2560-A : E 42 2 RA 73

General description

Rutile coated electrode with brittle slag, for fillet welds and horizontal V- and X-welds
 160% recovery, high welding speed
 Good X-ray soundness
 Even in narrow gaps and rusty materials easy slag release
 Class 3 approved

Welding positions



ISO/ASME PA/1G PB/2F PC/2G

Current type

AC / DC + / -

Approvals

ABS	DNV	GL	LR	TÜV
3,3Y	3	3	3,3Y	+

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

C	Mn	Si
0.07	0.95	0.3

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)		
					-10°C	-18°C	-20°C
Required: AWS A5.1		min. 400	min. 483	min. 22		min. 27	
ISO 2560-A		min. 420	500-640	min. 20			min. 47
Typical values	AW	475	520	26	70		67

Packaging and available sizes

	Diameter (mm)	3.2	4.0	5.0
	Length (mm)	450	450	450
Unit: box	Pieces / unit	99	60	41
	Net weight/unit (kg)	6.1	5.6	6.0

Identification

Imprint: 7024-1 / FERROD 165A

Tip Color: none

Ferrod 165A: rev. EN 21

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Materials to be welded

Steel grades/Code	Type
General structural steel	
EN 10025	S185, S235, S275, S355
Ship plates	
ASTM A 131	Grade A, B, D, AH32 to DH36
Cast steel	
EN 10213-2	G P 240R
Pipe material	
EN 10208-1	L210, L240, L290, L360
EN 10208-2	L240, L290, L360.
API 5LX	X42, X46, X52
Boiler & pressure vessel steel	
EN 10028-2	P235, P265, P295
Fine grained steel	
EN 10113-2	S275, S355
EN 10113-3	S275, S355

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
3.2 x 450	125 - 155	AC	75	326	1.9	62.9	25	1.39
4.0 x 450	140 - 235	AC	65	527	3.6	96.5	15	1.39
5.0 x 450	210 - 330	AC	68	853	5.3	144.9	10	1.39
6.0 x 450	280 - 430	AC	73	1271	7.0	209.8	7	1.35

* stub end 35 mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G	PB/2F	PC/2G
3.2	160A	150A	150A
4.0	220A	200A	195A
5.0	310A	290A	
6.0	390A	360A	

Remarks/ Application advice

High yield strength steels such as S355, L360, P355 and X60 preheat according EN 1011-1