

# Ferrod<sup>®</sup> 165A

## CLASSIFICATION

AWS A5.1	E7024	A-Nr	1
ISO 2560-A	E 42 0 RR 73	F-Nr	1
		9606 FM	1

## GENERAL DESCRIPTION

Rutile-acid 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)



## 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, TYPICAL, ALL WELD METAL

Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
				-10°C	-18°C/-20°C
Required: AWS A5.1 ISO 2560-A	min. 400 min. 420	min. 490 500-640	min. 22 min. 20		min. 27 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
Carton + PE foil	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. C-EN24-02/09/21

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## EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Code	Type
<b>General structural steels</b>	
EN 10025	S185, S235, S275, S355
<b>Ship plates</b>	
ASTM A 131	Grade A, B, D, AH32 to DH36
<b>Cast steels</b>	
EN 10213-2	GP240R
<b>Boiler &amp; pressure vessel steels</b>	
EN 10028-2	P235, P265, P295, P355
<b>Fine grained steels</b>	
EN 10025 part 3	S275, S355
EN 10025 part 4	S275, S355

## CALCULATION DATA

Diam. x length (mm)	Current range (A)	Current type	Arc time	Energy	Dep. rate	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal/ B	kg electrodes/ kg weldmetal 1/N
			- per electrode at max. current - [S]*	E[kJ]	H[kg/h]			
3.2x450	125-155	AC	75	326	1.9	62.9	25	1.39
4.0x450	140-235	AC	65	527	3.6	96.5	15	1.39
5.0x450	210-330	AC	68	853	5.3	144.9	10	1.39

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

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

## REMARKS / APPLICATION ADVICE

High yield strength steels such as S355, P355 and DH36 preheat according EN 1011-1