

CLASSIFICATION

AWS A5.1 : E 6013
ISO 2560-A : E 42 0 RC 11

GENERAL DESCRIPTION

Rutile general purpose, all position electrode, including vertical down
Vertical down only applicable for “clean” structural steel
Also weldable with low Open Circuit Voltage transformers (min. OCV 42V)

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PG/3Gd



PE/4G

CURRENT TYPE

AC / DC -

APPROVALS

ABS	BV	GL	LR	TÜV	DNV
2	2	2	2	+	2

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si
0.07	0.5	0.5

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	Yield strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) 0°C
Required: AWS A5.1 ISO 2560-A Typical values	AW	min. 330 min. 420 520	min. 430 500-640 550	min. 17 min. 20 26	not required min. 47 60

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	4.0
	Length (mm)	350	350
Unit: Carton + PE foil	Pieces / unit	145	120
	Net weight/unit (kg)	2.8	5.4

Identification Imprint: 6013 / PANTA Tip Color: none

Panta® : rev. C-EN24-01/02/15

Panta®**EXAMPLES OF MATERIALS TO BE WELDED**

Steel grades/Code	Type
General structural steels	
EN 10025	S185, S235, S275
Ship plates	
ASTM A 131	Grade A, B, D
Cast steels	
EN 10213-2	GP240R
Pipe material	
EN 10208-1	L210, L240, L290
EN 10208-2	L240, L290
API 5LX	X42, X46
EN 10216-1/EN10217-1	P235, P275
Boiler & pressure vessel steel	
EN 10028-2	P235, P265, P295
Fine grained steels	
EN 10025 part 3	S275
EN 10025 part 4	S275

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
2.5x350	70-90	AC	47	109	0.8	175	90	1.58
4.0x350	130-160	AC	59	301	1.7	42.4	37	1.57

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions					
	PA/1G	PB/2F	PC/2G	PF/3G up	PG/3G down	PE/4G
2.5	80A	75A	75A	75A	75A	75A
4.0	175A	165A	160A	160A	170A	160A

REMARKS / APPLICATION ADVICE

Vertical down only applicable for "clean" structural steel