

Arosta® 307-160

SMAW

CLASSIFICATION

AWS A5.4	E307-26*	A-Nr	8	Mat-Nr	1.4370
ISO 3581-A	E 18 8 Mn R 5 3	F-Nr	5		
* Nearest classification, see remarks		9606 FM	5		

GENERAL DESCRIPTION

A rutile 6%Mn-alloyed stainless steel electrode
Especially developed for steels difficult to weld, such as armour plates and austenitic high Mn-steels
Often used as a buffer layer in hardfacing applications
Weldable on DC+ polarity

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F

CURRENT TYPE

AC/DC +

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

C	Mn	Si	Cr	Ni
0.06	6.0	1.0	18.0	8.0

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]	Impact ISO-V(J)	
				+20°C	-10°C
Required: AWS A5.4 ISO 3581-A Typical values	not required min. 350 425	min. 590 min. 500 650	min. 30 min. 25 35	not required not required 85	60

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	Length (mm)		
			Pieces / unit	Net weight/unit (kg)
Carton + PE foil	3.2	4.0	94	62
	350	450	4.7	6.0

Identification Imprint: AROSTA 307-160 Tip Color: red

Arosta 307-160: rev. C-EN06-01/02/16

All information in this data sheet is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.eu for any updated information.
Fumes: Safety Data Sheets (SDS) are available on our website.

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EXAMPLES OF MATERIALS TO BE WELDED

Various steel grades, such as:

- Armour plate
- Hardenable steels including steels difficult to weld
- Non-magnetic austenitic steels
- Work hardening austenitic manganese steels
- Dissimilar steel grades (CMn-steels to stainless steel)

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CALCULATION DATA

Sizes		Current range (A)	Current type	Arc time		Energy		Dep. rate		Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
Diam. x length (mm)				- per electrode at max. current - (S)*	E(kJ)	H(kg/h)						
3.2 x 350		110-150	DC+	53	132	1.4	29.1	48	1.39			
4.0 x 450		140-200	DC+	86	264	1.7	55.9	25	1.41			

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
3.2	150A	140A	140A
4.0	200A	180A	160A

REMARKS / APPLICATION ADVICE

Deviations: chemical composition

Mn = 4.5 - 7.5%

Cr = 17.0 - 20.0%

Ni = 7.0 - 10.0%

AWS: Mn = 3.30 - 4.75%

AWS: Cr = 18.0 - 21.5%

AWS: Ni = 9.0 - 10.7%