

Limarosta® 312

EMR  
SAHARA®

SMAW

CLASSIFICATION

AWS A5.4	E312-17	A-Nr	8	Mat-Nr	1.4337
ISO 3581-A	E 29 9 R 12	F-Nr	5		
		9606 FM	5		

TEMPERATURE RANGE

Pressurized parts : -10...+350°C  
Oxidation resistance : n.a

GENERAL DESCRIPTION

A rutile-basic high CrNi-alloyed all position electrode  
Excellent for repair welding  
Especially developed for steels difficult to weld, such as armour plates, austenitic Mn-steels and high C-steels  
Excellent weldability and self releasing slag  
Weldable on AC and DC+ polarity  
Also available in vacuum sealed Sahara ReadyPack® (SRP)

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

CURRENT TYPE

AC/DC +

APPROVALS

DB

+

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

C	Mn	Si	Cr	Ni
0.11	0.9	1.0	29.0	9.0

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition		0.2% Proof strength [N/mm²]	Tensile strength [N/mm²]	Elongation [%]	Impact ISO-V(J) +20°C
Required: AWS 5.4 ISO 3581-A Typical values	AW	not required min. 450 700	min. 660 min. 650 800	min. 22 min. 15 20	not required not required 50

PACKAGING AND AVAILABLE SIZES

Diameter (mm) Length (mm)		2.0	2.5	3.2	4.0
		300	350	350	350
Carton + PE foil	Pieces / unit	175	125	150	100
	Net weight/unit (kg)	2.2	2.6	5.0	5.0
SRP	Pieces / unit	-	69	52	31
	Net weight/unit (kg)	-	1.5	1.8	1.5
Linc Pack	Pieces / unit	-	48	30	-
	Net weight/unit (kg)	-	1.0	1.0	-

Identification Imprint: 312-17 / LIMAROSTA 312 Tip Color: black

Limarosta®312: rev. C-EN26-01/02/16

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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) up to max. thickness of 12 mm

## 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
2.0 x 300	40-55	DC+	41	45	0.59	12.0	150	1.80
2.5 x 350	50-70	DC+	57	91	0.73	20.7	87	1.79
3.2 x 350	70-100	DC+	60	126	1.1	33.0	52	1.72
4.0 x 350	100-130	DC+	72	273	1.4	49.7	35	1.72

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter [mm]	Welding positions					
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PH/5Gup
2.5	70A	70A	70A	60A	60A	60A
3.2	100A	90A	100A	65A	65A	65A
4.0	130A	125A	130A	80A		