29.9 SUPER R (Limarosta 312)

MMA (SMAW)

ACID RUTILE MMA ELECTRODE

PRODUCT DESCRIPTION

MMA electrode with acid rutile flux on matching 312 stainless steel core wire.
Recovery is about 100% with respect to core wire, 65% with respect to whole electrode.

CLASSIFICATIONS

AWS A5.4M	(E312-17) nearest classification
ISO 3581	E 29 9 R 3 2

ASME IX QUALIFICATION

QW432	F-No 5 (This is nearest because the electrode does not strictly conform to AWS)
QW442	A-No

WELDING POSITIONS (ISO/ASME)

PA/1G PB/2F PC/2G PF/3Gu PE/4G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu
min.	--	--	--	--	--	28.0	8.0	--	--
max.	0.15	1.5	1.2	0.025	0.035	31.0	10.5	0.5	0.75
Typical	0.1	0.8	1	0.01	0.02	29	9.5	0.1	0.1

ALL-WELD MECHANICAL PROPERTIES

As welded		**min.**	**typical**
Tensile strength (MPa)		660	830
0.2% proof strength (MPa)		450	700
Elongation (%)	4d	22 *	26
	5d	15	25
Reduction of area %		--	30
Hardness HV		--	280

*Minimum elongation required by AWS not always obtained.
A high tensile strength with moderate ductility is typical for multipass all-weld test specimens but these properties may be altered under conditions of high dilution from base material for which this electrode is intended. Dilution typically raises ductility.

OPERATING PARAMETERS, DC +VE OR AC (OCV: 50V MIN)

Diameter (mm)	**2.5**	**3.2**	**4.0**	**5.0**
min. A	60	75	100	130
max. A	90	120	155	210

PACKAGING DATA

	Diameter (mm)	Length (mm)	Item number	No of pieces		Weight (kg)	
				can	carton	can	carton
METAL CAN	2.5	350	299SR-25	203	609	4.3	12.9
	3.2	350	299SR-32	140	420	4.6	13.8
	4.0	350	299SR-40	98	294	4.7	14.1
	5.0	350	299SR-50	-	-	4.5	13.5

Redrying : 200 – 250°C/1-2h to restore to as-packed condition. Maximum 400° C, 3 cycles, 10h total.

FUME DATA (WT % TYPICAL)

Fe	Mn	Ni	Cr	Cu	F	OES (mg/m³)
8	4	1	8	0.2	17	0.6

MAINTENANCE & REPAIR