

25.20.L.R

MMA ELECTRODE FOR 310L STAINLESS STEEL

PRODUCT DESCRIPTION

Special low silica basic rutile flux on low carbon stainless steel core wire.
Detrimental residual elements including silicon are kept to low levels for optimum corrosion performance.
Coupled with raised manganese, these features also ensure excellent resistance to microfissuring hot cracking.
Suitable for all-positional welding up to 3.2mm diameter.
Recovery is about 140% with respect to core wire, 65% with respect to whole electrode.

SPECIFICATIONS

There are no national specifications for this electrode.
Approvals: Approved for welding equivalent parent material Uranus 65 by independent tests.

ASME IX QUALIFICATION

QW432 F-No --
QW442 A-No --

WELDING POSITIONS [ISO/ASME]



CHEMICAL COMPOSITION [WELD METAL WT %]

	C	Mn	Si	S	P	Cr	Ni	Mo	Nb	Cu
min.	--	4.0	--	--	--	24.0	19.0	--	--	--
max.	0.040	7.0	0.4	0.020	0.025	26.0	22.0	0.2	0.3	0.3
Typical	0.03	5	0.3	0.008	0.01	25	21	0.1	<0.1	0.08

ALL-WELD MECHANICAL PROPERTIES

As welded	Typical
Tensile strength (MPa)	520
0.2% proof strength (MPa)	350
Elongation [%] 4d	37
5d	30
Reduction of area [%]	55
Impact ISO-V[I] -196°C	90
Hardness (HV)	170

ALL-WELD CORROSION PROPERTIES

The weld metal has been subjected to the Huey test (ASTM A262 practice C: 5 x 48hr periods in boiling 65% nitric acid).
The corrosion rates were as follows:

Condition	Corrosion rate	Selective attack
As-welded	0.40 µm/48hr (= 0.07mm or 3 mils/year)	< 0.01mm
PWHT 815°C/2hrs	0.73 µm/48hr (= 0.13mm or 5 mils/year)	< 0.13mm

OPERATING PARAMETERS, DC +VE OR AC [OCV: 70V MIN]

Diameter (mm)	3.2	4.0
min. A	75	100
max. A	120	155

PACKAGING DATA

Diameter (mm)	3.2	4.0
Length (mm)	350	350
kg/carton	13.5	13.2
Pieces/carton	318	192

STORAGE

3 hermetically sealed ring-pull metal tins per carton, with unlimited shelf life. Direct use from tin is satisfactory for longer than a working shift of 8h. Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.
For electrodes that have been exposed:

Redry 150 – 200°C/1-2h to restore to as-packed condition. Maximum 250° C, 3 cycles, 10h total.

Storage of redried electrodes at 50 – 200°C in holding oven or heated quiver: no limit, but maximum 6 weeks recommended. Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

FUME DATA

Fume composition (wt %) typical

Fe	Mn	Ni	Cr	Cu	F	OES (mg/m ³)
9	10	2	75	<0.2	18	0.6