

ULTRAMET B316L(N)

BASIC MMA ELECTRODE

PRODUCT DESCRIPTION

MMA electrode – special basic flux coated 308L electrode on high purity 304L core wire. Versatile downhand and positional capability, **Ultramet B316L(N)** has a controlled composition and ferrite content designed to meet the requirements of the RCC-M data sheet S 2925

Recovery is about 110% with respect to core wire, 65% with respect to whole electrode.

SPECIFICATIONS

AWS A5.4M	E316L-15
BS EN ISO 3581	E 19 12 3 L B 4 2
RCC-M	S 2925

ASME IX QUALIFICATION

QW432	F-No 5
QW442	A-No 8

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	Co	N	FN *
Min.	--	0.5	--	--	--	18.00	12.00	2.5	--	--	--	5
Max.	0.035	2.0	0.90	0.025	0.025	20.00	13.0	3.00	0.75	0.20	--	15
Typical	0.025	1.3	0.3	0.01	0.02	19.5	12.5	2.6	<0.1	0.04	0.05	10

* Ferrite calculated in accordance with DeLong diagram.

ALL-WELD MECHANICAL PROPERTIES

As-welded	Min.	Typical +20°C	Min +350°C	Typical +350/+360°C
Tensile strength (MPa)	520	600	--	480/480
0.2% proof strength (MPa)	320	470	140/130	350/350
Elongation (%) 4d	30	39	--	30/30
5d	30	37	--	--
Reduction of area (%)	--	58	--	50/50
Impact ISO-V(I) +20°C	60 (42) *	85	--	--

* Minimum average (minimum individual value).

TYPICAL 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)	2.5	3.2	4.0
Length (mm)	300	350	350
kg/carton	12.0	13.5	13.5
Pieces/carton	669	397	397

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 200 – 300°C/1-2h to restore to as-packed condition. Maximum 400° 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 %)

Fe	Mn	Cr	Ni	Mo	Cu	F	OES (mg/m ³)
8	5	5	1	0.5	< 0.2	16	1